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Original Communications.

THE CLIMATOLOGY OF MUSKOKA, ONTARIO, CANADA.*

BY J. H. ELLIOTT, M.B, GRAVENHURST, CANADA,
Muskoka Cottage Sanatorium.

The district of Muskoka lies on the eastern shores of the Georgian Bay, between the counties of Simcoe, Ontario and Victoria on the south, and the district of Parry Sound on the north; its southern portion is 100 miles distant from Toronto. The 45th parallel of latitude passes through it, and its longitude is about 80 deg. W. It lies practically due north of Pittsburg, Pa., and Charleston, S.C., and is in the latitude of St. Paul and Minneapolis and the northern portion of the Yellowstone Park, and is about one degree higher in latitude than the Adirondacks. It has been well named the "Highlands of Ontario." The elevation is very moderate, varying from 600 to 1,400 feet. The shores of Georgian Bay are 580 feet above sea level, the Muskoka Lakes (Muskoka, Rosseau and Joseph), 750 feet, Huntsville and the Lake of Bays about 1,000 feet, while the north-east corner reaches 1,400 feet. This part is only a few miles distant from the Algonquin National Park, a reservation of over a million acres from which radiate three great lake and river systems of the Province—the French, Magnetawan and Muskoka Rivers to the west, the Petawa and Ottawa to the east, and the Trent system to the south. The stations of the Canada Atlantic Railway in this portion of the Park have an elevation of 1,300 to 1,600 feet.

*Read before the American Climatological Association, Philadelphia, June 4th, 1904.

TABLE OF ELEVATIONS ALONG LINE OF GRAND TRUNK RAILWAY IN MUSKOKA.

Miles from Toronto.		Elevation.
100.1	Severn Station	730
100.3	Severn River, water 697; rail	724
104.0	Kasheshe-bogamog River, water, 710; rail	719
105.9	Kilworthy Station	755
109.4	Summit	851
111.4	Gravenhurst Station	818
112.4	Muskoka Wharf Station	749
	Muskoka Lake, water (Aug. 21st, 1900)	745
117.8	Summit, ground, 3,450 ft. south, 916; rail	910
120.5	South Branch, Muskoka River, water, 745; bed, 730; rail	806
121.3	North Branch, Muskoka River, water, 778; bed, 776; rail	821
121.6	Bracebridge Station	817
126.3	Falkenburg Station	957
128.0	Summit, ground, 1,069; rail	1,058
131.8	Depression, ground 983; rail	998
135.1	Utterson Station	1,041
135.8	Summit, ground, 1,071; rail	1,057
138.4	Allensville, road crossing	970
139.9	Caswell Lake, water, 1,001; rail	1,011
141.0	Summit, ground, 500 ft. north, 1,066; rail	1,049
145.9	Huntsville Station	957
146.1	Vernon Lake, water	936
146.5	Vernon River, water, 936; rail	972
147.8	Summit, ground, 1,012; rail	1,001
150.2	East River, water, 938; rail	961
155.4	Novar Station	1,075

To the hunter and angler the Muskoka Lakes district offers a great variety. Deer, bear, fox, rabbit and partridge are numerous, while the fishing grounds for black bass, maskinonge, pickerel, salmon trout and speckled trout cannot be surpassed. It is estimated that each year over 12,000 deer are killed during the open season in November, but owing to the protection given them and the excellent cover and feeding ground, their numbers continue to increase rather than decrease.

Writers have derived the word Muskoka from various sources. The word is of Indian origin. Musque-doh, "clear sky land," is the signification usually given to it, and this seems a very plausible one and has been generally accepted. Others trace it to Mus-quo-tah, signifying "red ground," referring to the rusty color of the soil and rocks in places, but there is little doubt that the district derives its name from the Mississauga chief Muskoka, or Mesqua-Ukee (not-easily-turned-back-in-the day-of-battle), who fought with the British in the war of 1812 and was given a medal. His tribe lived along the north shore of Lake Ontario and east of Lake Simcoe, and though Muskoka still possesses deer and game in abundance, it must then have been a hunter's paradise. The south branch of the Muskoka River was the patrimony of this warrior and hunter. Little could he have thought as he yearly sought sport and recreation

in these northern wilds, that a century later it would be peopled each summer by thousands seeking rest and health during their summer vacation.

Muskoka is an unorganized district, having no municipal government, but being under the direct control of the Ontario Legislature, owing to its being so sparsely settled. In it are twenty-one townships, and it covers an area, roughly, of 1,500 square miles. The population is about 21,000.

The rock formation throughout Muskoka is the Laurentian, a continuation of that which extends throughout northern Ontario and Quebec. It is not mountainous, but a succession of jutting boulders and huge hog-backs covered with vegetation, except where denuded by forest fires. Scattered through it are hundreds of pretty lakes, all of which are dotted with islands. Only rarely does the soil come to the water's edge; either rocks or sand beaches form the shore line everywhere, while the islands for the most part are huge masses of rock rising boldly out of the water, verdure clad. In the three lakes, Muskoka (22 miles long), Rosseau and Joseph (each 16 miles long), are over 400 islands.

Pine and hemlock abound everywhere. The principal deciduous trees are the sugar maple, beech, basswood (Linden), and the birches. The silver birch and aspen are seen everywhere blending their pale green with the deeper green of the larger trees. The flora of the district is a very rich one. The Alpine flora of northern Canada begins here, while all the plants of Ontario, except the southernmost, find a home. Within a radius of a mile of the Sanatorium at Gravenhurst over 300 species of flowering plants are to be found, while the lichens, mosses and ferns grow in abundance and most luxuriantly; the great Osmundas are almost tropical in their growth, very fine specimens of club mosses are found everywhere, and pitcher plants and various orchids, particularly Habenaria, Cypripedium and Pogonia, reveal themselves, not to the hurrying tourist, but to those who know their favorite haunts.

The summers are warm, with as a rule, cool nights. Only occasionally is there a night which is uncomfortably warm. The mean daily maximum for June, July and August is 77.4 and mean daily minimum 53.3. During September it becomes noticeably cooler, the mean daily maximum being 69.3 and the mean daily minimum 48.0. Late September and early October are delightful with the gorgeous coloring of the maples and oaks, mixed with the yellows and browns of the beeches, aspens and birches, with the green background of pines and hemlocks or the dull reds and browns of the granite rocks or the grey and green of the lichens and mosses which flourish on them. No pen can

draw a picture of the beauty of the lakes and islands during the changes of autumn.

Snow appears in flurries during November, and about December 1st the ground is covered, remaining so till March. Winter thaws are unusual; once the snow comes, it remains, and sleighing once established remains good till spring. Rarely is there the succession of snow and rain so frequent in the region of Lakes Ontario and Erie. The lakes freeze over late in November or early in December and do not open again until April. The thickness of ice will vary from 16 to 24 or even 30 inches. Though the air in winter is cold, it is comparatively dry and is not penetrating, and sitting out of doors or driving is made very comfortable by means of furs and rugs. The mean temperature for the four winter months, December to March, is 19.1 and the mean relative humidity is 81, the air

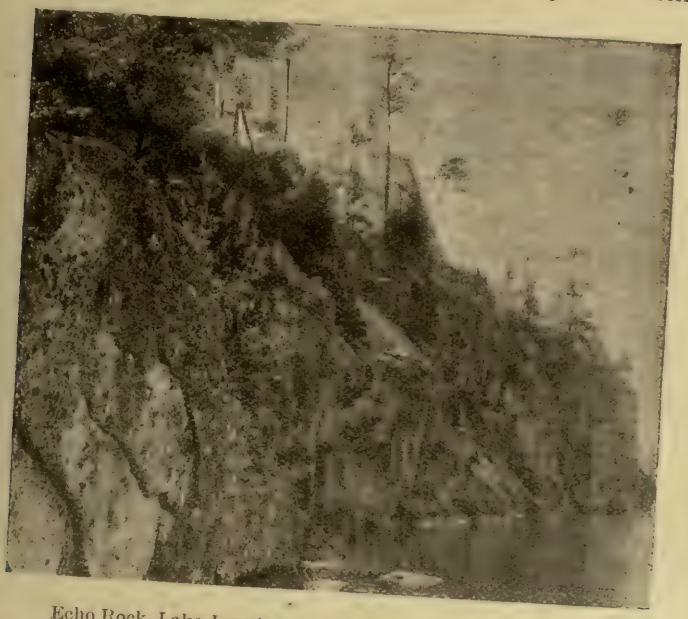
The Muskoka Lakes, with their numerous islands.

holding only about .9 grain of moisture per cubic foot or one-third the moisture of air at 60 deg. which has a relative humidity of only 50. The mean daily maximum for the four months is 26 deg. and mean daily minimum 9.5 deg. Mean monthly maximum 45.2 deg. Mean monthly minimum —20.3 deg. Mean yearly minimum —31.7 deg.

As a rule the wind drops when the mercury reaches zero or a few points below, and with a temperature of —10 deg. or —20 deg. the atmosphere is still and clear. Some of the most perfect days are when the temperature is below this; not a cloud in the sky, the snow crisp and sparkling in the sunlight, and the smoke from fires rising straight up into the air. The total annual snowfall is 99.4 inches, there being an average of 18 to 24 inches usually on the ground.

April and May, which are the spring months, have a mean temperature of 47.9 deg., a mean daily maximum of 57.9 deg., a mean daily minimum of 36 deg., and a mean relative humidity of 60. Thus the climate is not humid, but moderately dry. The rainfall for the two months is 4.08 inches, April having a mean of seven days on which rain falls and May having eleven. Mean snowfall for April 2.2 inches, May 0.2.

The first of the wild flowers appear in March or early April, before the snow has disappeared, and by the first of May the woods are carpeted with them—hepatica, claytonia trillium,



Echo Rock, Lake Joseph, showing the typical rock formation.

dicentra, violets, tiarella, and hosts of others: while later the secluded places and sphagnum woods abound in laurel andromeda and many others of the heaths. The rocks, too, are covered with the bloom of blueberries, huckle-berries, strawberries and wild cherries, which later bear a profusion of fruit.

The following table of temperature, rainfall, etc., at Gravenhurst, Lat. 44.54 N., Long. 79.20 W. (770 feet), is, with the exception of relative humidity, from observations by T. M. Robinson, Esq., covering a period of thirty-two years. Instruments used, those of the Dominion Meteorological Service. The relative humidity is from personal observations, covering three years. Negretti and Zamb a thermometers Sunshine from recorder of the "burning" type over a period of two years:

TEMPERATURE, RAINFALL, ETC., AT GRAVENHURST, ONT.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Mean temperature.....	15.5	14.7	24.7	41.8	53.9	63.7	67.7	65.3	57.7	46.5	33.7	21.7	42.2
Maximum	40.8	43.2	49.9	71.8	80.2	87.1	91.0	89.4	83.3	74.1	58.7	46.9	93.2
Minimum.....	—25.0	—28.0	—13.7	11.9	30.1	34.2	42.7	39.9	30.4	22.9	7.9	—14.4	—31.7
Mean daily maximum	24.2	25.7	23.7	51.5	64.4	75.9	78.7	77.5	69.3	57.0	40.5	30.4	..
Mean daily minimum	5.8	5.1	12.7	30.1	42.0	51.9	55.4	52.5	48.0	37.9	27.8	14.4	..
Mean daily range	18.4	20.6	11.0	21.4	22.4	24.0	23.3	25.0	21.3	19.1	12.7	16.0	19.6
Rainfall, in inches.....	0.73	0.44	1.30	1.39	2.69	3.44	3.02	3.30	3.23	2.92	1.84	1.44	25.74
Rain, number of days . ..	3	2	4	7	11	10	9	9	11	10	7	5	88
Snowfall, in inches	26.1	18.6	12.1	2.2	0.2	..	..	..	..	1.9	13.2	25.1	99.4
Snow, number of days....	14	11	8	2	1	..	..	..	..	2	8	12	58
Number of clear days	11	13	15	17	15	17	19	20	18	16	10	10	181
Number of cloudy days ...	20	15	16	13	16	13	12	11	12	15	20	21	184
Mean humidity.....	87	81	70	60	60	68	68	76	76	76	84	86	74

PREVAILING WINDS DURING THE YEAR. FROM TRI-DAILY OBSERVATIONS.

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.
126	29	84	148	158	71	166	103	210

MEAN PROPORTION OF BRIGHT SUNSHINE, GRAVENHURST.

Two Years' Observations.

	1902		1903	
	Mean Proportion.	Days Completely Clouded.	Mean Proportion.	Days Completely Clouded.
May	.46	1	.68	2
June	.46	0	.50	0
July	.54	1	.58	0
August	.57	0	.50	2
September	.35	8	.43	1
October	.40	5	.45	4
November	.39	10	.36	7
December	.33	10	.29	13
January	.25	12	.25	13
February	.28	15	.45	6
March	.34	9	.35	9
April	.53	3	.41	3

Mean of two years' sunshine—1902, .40; 1903, .44.
Days each year completely clouded—1902, 74; 1903, 60.

The skies in Muskoka are wonderfully clear, there being a remarkable freedom from haze and dust. The freedom from dust is well evidenced in the winter, the snow retaining its whiteness and purity through the spring until it has quite disappeared. Never does one see the snowbanks during mild weather a mass of dirt and muddy snow. There is a hazy aspect over the skies, particularly about the horizon during the ideal Indian summer weather which appears during the autumn.

Lumbering is the chief industry, and as there is comparatively little land under cultivation, there is a minimum of dust.

Public highways, with the exception of one or two leading roads, are little used, and this factor is unimportant. The purity of the atmosphere is well attested by the fact that suppuration of wounds is very rare, healing by first intention being the rule.

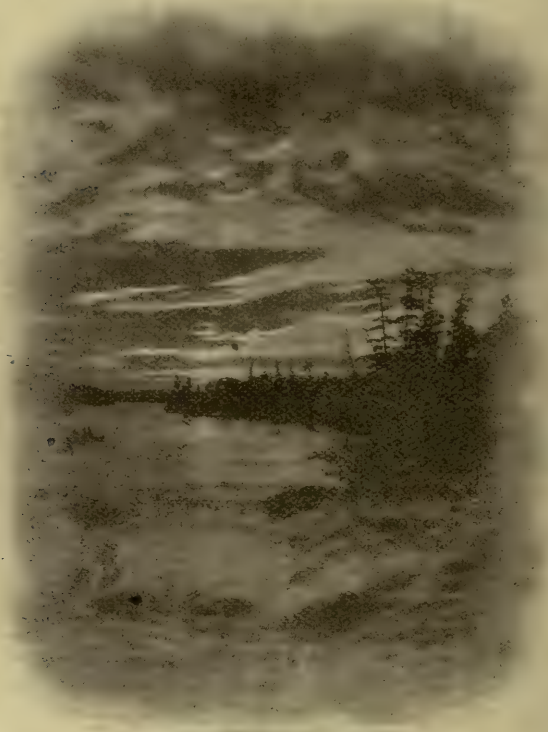
Fogs occur but seldom, varying from four to ten in each year, and these always dispersing when the sun comes out.

I extract the following from the 1898 "Transactions of the Astronomical and Physical Society of Toronto": "Mr. John A. Paterson, who had just returned from a holiday trip, spoke enthusiastically of the serenity of the skies in the Muskoka district. Last August I visited a pleasantly sequestered nook in the Georgian Bay, bearing the mellifluous name of Honey Harbor, and there the evening sky was to me a revelation. The transparency of the air is such that the ordinary eye is as good as a telescope of moderate power. Here we do not, and cannot, see the glories of the heavens as they look down on us, but in Muskoka, the bosom of old night seems on

fire and sparkles with as many colored glories as the hilt of King Arthur's sword Excalibur?

The following, also bearing on the clear atmosphere of Muskoka, I extract from a paper by the President of the same Astronomical Society:

"I have often wondered why the attention of tourists is not called to the ideal conditions which exist in Muskoka and our northern districts for the observation of the sun, moon and stars. Having spent portions of seven summers in that truly delightful region, and having availed myself of nearly every



Sunset at Bala Falls, the outlet of the Muskoka Lakes.

opportunity that was offered, I have over and over again been impressed by the signal advantages everywhere present for making astronomical observations. In no other place has it been my fortune to see the sun with so white a disc, or the moon with such a silvery sheen, or the stars of such brilliance. By day the skies are as blue as the skies of Italy, and by night as black as those of the tropics. Against the Ethiopian hue of

the night sky, celestial objects stand out clear-cut and with marvellous beauty. The atmosphere is pellucid. Setting stars can be followed down to the very horizon, and I have often seen Capella, that lovely sun in Auriga, skirting through the branches or the distant tree-tops along the north-western sky-line. In other less favorable localities, stars are commonly bedimmed by, or lost in, the low hanging mist, dust and haze, which either blur or effectually extinguish them before they set. During the past summer I was surprised at the wealth of detail revealed day after day upon the sun, especially where there were spots and faculæ, and night after night upon the

Muskoka Free Hospital for Consumptives: Administration Building. Established 1901, by the National Sanitarium Association of Canada; maintained by voluntary contributions; 75 beds.

moon, and in the interesting planetary systems of Jupiter and Saturn. I quite agree with the celebrated American astronomer who spends his holidays in Muskoka, that in our northern districts a first-class field glass will usually do the work of a small but excellent telescope used almost anywhere farther south. Then, in addition to the peculiar astronomical, observational advantages, there are frequent displays of auroræ and atmospheric effects of unrivalled variety and beauty. The latter include gorgeous sunsets, mock suns, solar halos and rays.

Not infrequently the sun goes down in skies which beggar the powers of description, flecked as they are by fleecy clouds of opalescent tints, contrasting with rich crimsons, lakes, carmines and other brilliant colors, thrown upon golden-green backgrounds, and shading through all the tints of blue, from the faintest hues in the west to the deepest tones overhead, and to almost black purples in the east."

The water in Muskoka is particularly pure. The rivers and lakes show in the sunlight a mass of blue and silver, but looking into their depths, especially in the rivers, they possess a brownish aspect. Throughout northern Ontario the rivers are dark, due to the vegetable matter in solution taken up from their sources and along their beds, and remaining unprecipitated owing to the softness of the water and the absence of metallic salts. Rushing over rocks and boulders, and passing through a sparsely settled country with little possibility of contamination the waters are free from impurities. They are, too, peculiarly free of any degree of hardness owing to the absence of lime in the Laurentian rock, which is the only system in the district. Even the well water is comparatively soft. The following table shows an analysis of the water of Lake Muskoka, made by Dr. J. A. Amyot, Provincial Bacteriologist. I have also tabulated analyses of well water taken from a 12-foot well in the woods about eighteen feet from the shore of the lake, and that of a seepage spring passing through meadow and wooded land. These three sources form the water supply of the Muskoka Cottage Sanatorium and the Muskoka Free Hospital for Consumptives, Gravenhurst.

		1 Well Water M. C. S.	2 Lake Water.	3 Free Hospital Supply.
Color		None	Straw yellow	Yellower than No. 2
Odor (cold)		None	None	None
Odor (after heating)		None	None	None
Albuminoid ammonia	Parts per million.	.085	.19	.095
Free ammonia		.055	.04	.085
Nitrogen, as nitrites and nitrates		.220	.08	.345
Oxygen consumed		4.00	13.20	11.40
Chlorine		4.00	4.00	4.00
Total hardness		13.00	5.00	8.00

No iron was found in residue from 200 c.c. water evaporated in dryness.

A bacteriological examination of three samples taken from Gull Lake showed no colon bacilli, and of bacteria of all kinds 33, 34 and 23 colonies per c.c. respectively.

The town of Gravenhurst (pop. 2,500) lies between these two lakes, touching both of them.

One very noticeable feature in Muskoka is that in the hottest summer weather it is perfectly safe to go about with the

head bare. What there is in the atmosphere to account for this I cannot say, but the average summer resident goes about hatless throughout the season, and sunstroke is unknown.

Sufferers from hay fever have, in Muskoka, immunity from their distressing attacks, and each year an increasing number of these patients make the district their objective point during the autumn. It is unusual to see a case in which the symptoms do not disappear within twenty-four hours of arrival, while if the date of the attack is anticipated, none of the symptoms develop. Asthma, too, is markedly relieved by residence in Muskoka. I have seen many cases of long standing materially

Muskoka Cottage Sanatorium: Administration Building. Established, 1896, by the National Sanitarium Association of Canada. The first in Canada for the treatment of pulmonary tuberculosis; 70 beds.

improved, with an entire cessation of paroxysms, without medication. Pneumonia is comparatively rare, many physicians rarely seeing more than one or two cases in a year. In over 1,000 cases of pulmonary tuberculosis under personal observation, I have never seen lobar pneumonia develop. Simple anemias are quickly benefited by a residence in Muskoka, with the out-of-door life and the acquirement of what is commonly known as the Muskoka appetite.

The wonderful variety of scenery, of rock, lake, river and forest, with the adaptability of the surroundings to meet the

varying moods of the neurasthenic, make it a splendid place for such cases.

For many years the district has been growing in favor as suitable for the treatment of pulmonary tuberculosis. At first, patients were sent only for the summer months, but since the establishment of the two sanatoria of the National Sanitarium Association of Canada, the experience of Trudeau in the Adirondacks has been found to hold here also—that in winter cases do better even than in summer, and its value as a place of winter residence is becoming more recognized.* The severe winters are enjoyed by the robust patient and those whose recuperative powers are good, but render it unsuitable for the advanced case with anemia and poor capillary circulation, who is weak and cannot stand the cold. But it is really surprising to see how many come to us who say it will be impossible for them to sit out during the winter, and who, in a very short time are enquiring whether there will be any objection to sleeping with the temperature of the bedroom 30° Fah. instead of 45°.

The presence of so much water in the lakes and rivers has been urged as an objection to its being a suitable climate for pulmonary invalids, but I am each year more convinced of the value of time spent on the lake in boating, canoeing or sailing, both to those who are strong enough to indulge in the exercise themselves and to those unable to take active exercise, who must perforce leave the management of their craft to others.

The death rate for 1902 was 11.2 per 1,000. The rate is increased by the accidents incident to lumbering, saw mills, etc., while the influx of thousands during the summer season also increases the rate.

The islands and shores of the Muskoka Lakes are dotted with hundreds of cottages occupied during the summer months by visitors from all parts of the United States and Canada, from an unpretentious camp or shack to the Club house or the villa which has cost many thousands. Canoes, yachts, dingies and launches ply the waters everywhere while the large boats of the Muskoka Navigation Company make all points on the lakes accessible by their twice daily trips. Muskoka Wharf at Gravenhurst is the distributing point for these lakes.

The Lake of Bays District is reached from Huntsville. Though more recently opened it is rapidly building up with camps and cottages. It is somewhat higher than the Muskoka Lakes, but otherwise similar.

The Georgian Bay region of Muskoka with its 20,000 islands is reached by boat from Midland or Penetanguishene, but is accessible only during the summer months.

Vide Editorial, *Canada Laneet*, May, 1904.

The cost of living is everywhere moderate, and the tastes of all are catered to, from the modest farm house at $3.00 to $4.00 per week to the better equipped hotel at $8.00 to $12.00, while the "Royal Muskoka" in Lake Rosseau affords the comforts and luxuries of the most modern summer resort.

Muskoka is reached by the trains of the Grand Trunk Railway, which are run solid from Buffalo and Toronto to Muskoka Wharf and Huntsville.

To sum up—Muskoka is a sparsely settled district, readily accessible, abounding in the beauties of nature. The winters are cold and free from rain, fog and dampness; the spring and autumn often rainy but beautiful; the summer ideal in warm days and cool (not cold) nights. Game and fish abundant. The cost of living very moderate. No hay fever, no malaria. No dust. A clear atmosphere. Highly suitable for anemic, neurasthenic cases, for the weary business man seeking relaxation, recreation and sport, for the asthmatic, and practically all pulmonary invalids.

SOME OBSERVATIONS ON THE USE OF DIPHTHERIA ANTITOXIN.

By F. B. SHUTTLEWORTH, Phar.D., F.C.S.,
City Bacteriologist, Toronto.

A summary of the results of the use of diphtheria antitoxin in the Riverdale Hospital was presented, in 1900, at the annual meeting of the Association of Executive Health Officers of Ontario. This covered the period from 1894, when the first experiments were made, until the close of 1898, and comprised 157 cases with a mortality of 21.6 per cent., and an average hospital term of 25.4 days for the non-fatal cases. The average hospital mortality for the period was 14.3 per cent. and the term was 23.5 days. The hospital antitoxin cases represented the ordinary run of patients, and the remaining 43 cases were those to whom the remedy had been administered by city physicians before or immediately after the admission of the patients.

These results were so exceedingly discouraging that hospital experiments were for the time abandoned, and in 1899 only 10 cases were treated, either by the resident physician or by others. Two of the cases proved fatal, showing a mortality of 20.0 per cent. against an average hospital mortality of 12.4 per cent.

In 1900 there was some revival of interest in antitoxin. Sixty-two patients were treated in hospital, and there were, in addition, 20 others to whom it had been given before admission. Of these 82 cases 20.7 per cent. were fatal. The ordinary hospital mortality for the year was 14.8 per cent.

The following year there were 119 hospital and 35 outside cases of whom 17.5 per cent. died, the annual hospital rate being 13.4 per cent.

In 1902 there were only 105 antitoxin cases, and most of them had been treated by their own physicians before admission or shortly after arrival in hospital. The mortality was for the first time under the hospital rate, the figures being respectively 14.3 and 15.6 per cent.

The total number of antitoxin cases since 1894, up to the end of 1902 is 508, with 95 deaths or 18.7 per cent. The average hospital mortality for diphtheria for the same period is 14.0, showing a difference of 4.7 per cent. against antitoxin. This would, of course, be much increased if the antitoxin cases were not included in the hospital totals.

In order to account for this disappointing result it might be argued that in the cases treated with antitoxin in hospital the disease is generally too far advanced. Some light may be thrown on this assumption by separating the hospital cases from those treated by city physicians, as in the latter the

injection is often made before the patient is admitted, and thus, as a rule, the treatment commences somewhat earlier than in the hospital cases. Of the total of 508 there were 301 hospital cases with a mortality of 18.9, and 207 city cases with a mortality of 18.3 per cent., figures which are practically identical and which show that time has not been a factor of much importance.

Another way of attempting to explain the antitoxin position is that of assuming that the cases to whom serum is administered are generally of a more serious kind than others. This may be to some extent true with regard to hospital cases treated by city physicians, but it does not hold good generally as to those who came under the resident physician. The first cases were chosen purely for experimental purposes, so that the various types of diphtheria might be represented. In the second series of experiments comprising 100 cases, there was absolutely no selection, other than that every alternate patient between one and ten years of age was treated with antitoxin immediately after admission to hospital. In 1900 there were a few severe cases to whom the remedy was given in the hope that it might do some good, and also demonstrate its antitoxic power in the undoubted presence of toxin. In the balance of the hospital cases the serum was used at the request of the friends of the patient or of the attending physician. Taken altogether, the antitoxin cases might be accepted as being a shade more severe than the usual run, but by no means as much so as indicated by the excess of mortality.

A very fair estimate of severity may be made by the indications furnished by the site of the membrane. Pharyngeal cases are, of course, the most common, usually comprising from 50 to 60 per cent. (60 per cent. in 1900-1). Fifty-three per cent. of the antitoxin cases were of this character—a trifle under the average. Naso-pharyngeal cases are nearly always severe and make up from 20 to 30 per cent. of the patients admitted (28 per cent. in 1900-1) with a high mortality (35.0 per cent. in 1900-1). The proportion of antitoxin cases (27 per cent.) was fairly within the limits. Of laryngeal cases there were only 9 per cent. against 10 to 15. Altogether, as judged in this way, the antitoxin cases were fairly representative of average admissions.

The indisputable fact remains that, judged from the standpoint of case mortality, the results of the use of antitoxin in the Isolation Hospital, from 1894 to 1902 inclusive, have been decidedly unfavorable, both when estimated for each individual year, with the exception of 1902, and also collectively, as to the total result.

Another question to determine is that, of the influence of

antitoxin in the duration of the disease. In order to put this in a fair light it will be necessary to differentiate between duration of disease and duration of infection. It is here that there appears some evidence of the benefit of antitoxin, though the writer is unable to reduce it to a statistical form. The matron and nurses of the Hospital, after considerable experience, are of the opinion that antitoxin cases are "more easily nursed" than others; that is, symptoms are less severe and less lasting, more especially as to persistence of membrane.

The duration of the hospital term is, practically, that of infection, as the discharge is altogether determined on bacteriological evidence. Prof. J. J. Mackenzie and others have recently pointed out that the power of antitoxin is supposed to be expressed by its name, and that the serum is without direct influence on the life of the diphtheria bacillus, and consequently, to a great extent, on the duration of infection. Hospital records furnish exact data as to the comparative length of the term in various years. It was only in 1900 that the antitoxin term was less than that of the non-antitoxin cases, the figures being 18.6 against 19.2 days. In the first cases, from 1895 to 1898 inclusive, the antitoxin term was 1.8 days longer than in the untreated cases, in 1899 it was 4.6 days, and 4.0 in 1901, being 25 instead of an average of 21 days. These figures show that antitoxin does not lessen the duration of infection but apparently increases it.

A word or two may be said about the dose administered. The average number of units given by the hospital physician was generally larger than that considered sufficient by city physicians. Thus, in 1900, the average of the former was 2,350 units against 1,870; in 1901, 2,060 against 2,033. In 1902 there was practically no antitoxin administered at city expense, but the average dose otherwise was 2,750 units. As much as 10,000 units have been given by the hospital physician, and this has been in one case doubled by the attending physician.

During the past winter the writer visited most of the capitals of Northern and Central Europe, from Denmark to Hungary, and took every available opportunity of learning the feeling and practice with regard to antitoxin. On several occasions he had the privilege of conversing with the highest authorities, and noticed an absence of the exaggerated claims sometimes made on this side of the Atlantic, but, with few exceptions, found that antitoxin was highly esteemed, and was used in most of the large hospitals. Its low price in some countries, as in Austria, where an ordinary dose costs 90 heller—about 18 cents—favors its employment in this way. In most countries the government controls the manufacture of the remedy, and low price and high quality are thus ensured.

Clinical Note.

EPITHELIOMA—X-RAY CURE.

By EVERETT S. HICKS, M.D.
Port Dover Sanatorium.

Mr. G., aged 65, some five years ago noticed an abrasion under the ear, which he thought was a cut from shaving. Within the last year this has extended, and the margins have become thickened. Various opinions were given as to the nature of the trouble, and one practitioner used a caustic and succeeded in burning a hole through the centre of the growth. After this it spread rapidly, and the patient saw Dr. White, of Hamilton, who referred him to me for X-ray treatment. The growth extended from the top of the ear in front to below the lobule and back towards the mastoid. Diagnosis was confirmed by microscope. Avoidance of operation was important on account of the danger of injury to the facial nerve, and on account of the deformity sure to result. First treatment was given August 28th, the tube being two inches from the face, and the face protected by lead foil. Treatments were given every other day until a decided dermatitis resulted. This took about six treatments, and from that time the growth was rayed at irregular intervals, according to the amount of irritation present. Progress was uniformly steady, and the last of the fifteen treatments required was given about October 20th.

Selected Article.

OSLER AND OXFORD.

All Canada congratulates Dr. Osler on his appointment to the Chair of Medicine at Oxford, but it is natural that the medical profession should take the keenest interest in this important event, and the readers of the *Maritime Medical News* share the satisfaction of their brethren throughout the Dominion and join in heartily wishing the new professor a long and happy tenure of office.

We are all familiar with the career of our distinguished fellow-countryman, and we have learned to look to him not only as one of the great investigators into the mystery of disease, but as also a great illuminator of dark places and a safe and trusty guide.

There are few medical libraries in Canada without their copy of Osler's "Medicine." Indeed, this text-book is not only one of the recognized authorities throughout the English-speaking world, but it has been translated into several European languages.

We note with some amusement that many American papers speak of Dr. Osler as an American. And some of them are at a loss to know why he should leave America for Oxford, dwelling especially on the financial value of Dr. Osler's large consulting practice. They cannot apparently understand why a man should make a change except in the direction of a better salary, or why a "distinguished American professor" should leave a new and wealthy American university for one in England, old and by no means wealthy.

A better informed American paper, the *Chicago Inter-Ocean*, says: "He stands in the front rank of American physicians, and by many good judges is considered the foremost man in his profession. Johns Hopkins is proud of him and devoted to him. Harvard wanted him to reorganize her medical school, just provided with a new plant and a huge endowment. His private practice was limited in size and profit only by his own convenience. England could offer him no materal or professional reward he could not have here, and yet he goes to England.

"We have not seen anywhere, among all the surprised comment over Dr. Osler's decision, a suggestion of what, we venture to say, was his true reason for accepting the Oxford offer. Although he has lived in the United States for twenty years, and has won here deserved fame and fortune, he was born and bred under the British flag. In science he is of course, a cosmopolite, but we venture the conjecture that he has yielded to an influence that cosmopolites are wont to deride.

"It is necessary that a man love his native land," said a Greek poet more than 2,000 years ago. "His words may be otherwise, but his heart is there.' The instinct that leads men, just because they are men, back to the old home when the way is open, no matter what their wanderings or how fair their fortunes elsewhere, would seem to have operated upon William Osler. He can live where he pleases, and so he goes back under the old flag of his youth."

Dr. Osler has always been a true Canadian, loyal to British institutions and to the Union Jack.

We believe it is true that he had his little son baptised in the British consulate at Baltimore, so that he might, technically at least, be baptised on British soil.

There are two or three remarks we wish to make on this appointment.

In the first place it is a fact that the foundation of Dr. Osler's extraordinarily complete knowledge of medicine was laid in pathological study. The brilliant clinical studies carried on in Montreal, Philadelphia and Baltimore, had behind them weary hours and days of earnest work in the pathological laboratory of McGill.

And where did Dr. Osler learn the terseness and lucidity of his charming literary style, a style which makes his writings so clear and convincing, and his lectures and addresses works of art? Where, but in the careful and loving study of those ancient classics, those "dead languages," which some misguided people would have us expunge from our educational course.

It is only a few days since, sad to say, in an educational convention in this Province, the noble Mother of Learning, who has called William Osler to her side, was alluded to as "a moss-grown university."

We are making great and rapid progress in Canada, but we think it would be well to hesitate before going further than we have done in "improving" our educational system and in eliminating from it those factors which have produced the sages and scholars and statesmen of Europe for 1,000 years. The study of the classics has for centuries been the strongest feature of the "moss-grown universities" which have trained the leading spirits of the most dominant race in the world, and with very few exceptions, the Masters of Medicine have all been students of the ancient classics. And when Edinburgh calls for a MacGregor from Dalhousie, and Oxford summons an Osler from Johns Hopkins, they give proof to the world that their eyes are open and that their old warm, strong hearts still throb with the true life of a "universal" learning.—*Maritime Medical News.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

Phototherapy. By Prof. LUIGI MARAMALDI.

It was an Italian, Loretti, who towards the close of the seventeenth century maintained that fixed solar light is the most efficacious remedy for phthisis. Villet, at the beginning of the nineteenth century, claimed that he had cured dropsy by exposing patients for several hours in the day to the sun's rays. These early experiments led to a series of physical, chemical and biological investigations, so that what was mere empiricism became scientific.

The difference in action between the chemical and calorific rays of light is very great. The destructive influence of monochromatic light upon bacteria is due largely to the chemical rays. The bacillus of carbuncle and that of typhus thrive better in darkness and under the action of the less refrangible rays. Charcot in 1859 was the first to assert that solar eczema is due to the chemical and not to the calorific rays, and that the dermatitis caused by an intense electric light is of the same nature.

The influence of light on the course of small-pox had, in the nineteenth century, claimed the attention of physicians. Picton in 1832, Black, Barlow, Waters in 1867 and in 1871, had been studying this question. But it was Finsen who tried to interpret thoroughly the observations that had been made, having noted that the parts of the body exposed to light are the seat of deeper and more confluent scars, whereas in patients nursed in rooms in which the light passed through red glass, suppuration ceased and the scars were trifling. His deduction was that, in the former case, the unfavorable result was due to the chemical rays; in the latter the good result was due to the calorific rays. Swendsen, Jubel-Renoy and Feilberg obtained results similar to those of Finsen. The latter maintained that we must not only exclude the chemical rays of natural light, but also electrical and other forms of intense, artificial light.

Finsen's method has been applied in different infective dermatoses, and satisfactory results have been obtained in lupus vulgaris and alopecia areata. In his institution there have been treated about four hundred cases of lupus vulgaris, some by the light treatment, others with a previous application

to the affected parts of pyrogallic acid ointment, in order to render the skin more permeable to light. The results were good, except in a few cases, where the lesions were too deep and too rapid.

At the Congress of Dermatology in 1900, the conclusion was reached that phototherapy is one of the best methods of treating lupus vulgaris, but that it has two serious drawbacks—the great expense and the length of time required.

Charinière in 1900, having treated some cases of measles with the red light, observed that the eruption and the bronchitis were improved by it. In epithelioma good results have been reported, but not where the tumor is thick and deep.

It has also been determined that the chemical rays exert a sedative action on the nervous system, while the yellow and the red rays excite it. At Veldes there exists a large institution where every year thousands of patients are treated by eliotherapy (application of natural solar light), under the direction of Rikli, who has given great impulse to the treatment by light and air baths. In the summer these baths are taken between the hours of 10 a.m. and 5 p.m. The head being protected from the sun, the different parts of the body are exposed in turn, until the patient perspires freely. Sometimes a sand bath is added to the sun bath. These baths are preferable to the Turkish and Russian baths, because in the latter the patient must remain in an atmosphere of dry or moist air, at a temperature so high that he often finds it difficult to endure it. Moreover, he is breathing an air deficient in oxygen and filled with the poisons exhaled from his system, producing thus a form of auto-intoxication; besides, the moist air of these baths, having a higher pressure than that of atmospheric air, increases the pressure on the cutaneous vascular areas and thus puts a heavier work on the heart.

Among the artificial lights, that which most closely resembles the sun in therapeutic action is the electric light, either from an arc lamp or from an incandescent lamp. It has not the disadvantage of contaminating the atmosphere with carbonic acid gas or other products of combustion, while, like the solar light, it exerts a favorable action on vegetation, has the same bactericidal power and produces the same effects on the vital functions of man and the higher animals.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

The Relation of the Physician to Proprietary Remedies.

In the *Journal Amer. Med. Assn.*, December 3rd, Dr. Wm. J. Robinson divides physicians into three classes. Class A prescribe everything and anything which may be brought to their

notice, utterly regardless of composition. Class B, on the other hand, have gone to the other extreme and object to every patented preparation; while the third class investigate before they prescribe, adopting a scientific attitude which every physician should emulate. There is a wide difference between a *proprietary* nostrum and a *patented* preparation. The latter, as its etymology shows, is an open, non-secret medicine, its method of manufacture being described to the minutest detail when registered. But the numerous "antikamnias," "perunas," "sarsaparillas," etc., which are the curse of this continent, are only *trade-marked*, and could never be patented at all because there is nothing new in them except their lying advertisements. The true patent encourages invention, the proprietary preparation is a premium on pretence. The "chemical companies" who foist them on the medical public, consist usually of bankrupt druggists, ex-saloon keepers, real estate agents, etc., etc.

Dr. Robinson summarizes his paper as follows:

1. The prescribing and using of preparations, the composition of which is unknown, is to be condemned unequivocally. It is unscientific, unethical, and is bound to react injuriously on the physician and public alike.

2. The physician who refuses to use a thoroughly established remedy of known composition, merely because it is proprietary, is guilty of narrow-minded fanaticism, and he is not doing the best for his patients.

3. Substitution does exist, and is a serious evil, in some localities.

4. The abolition of substitution lies to a great extent in the physician's own hands, and he can accomplish it by making himself familiar with the physical characteristics of the remedies he prescribes by patronizing pharmacists in whom he has perfect confidence and by exposing those who he is certain are incorrigible substitutors.

5. The physician is guilty of encouraging substitution by ordering every new mixture that is brought to his attention by circulars, drummers, and venal journals.

6. Prescribing in original packages is an evil, but being a lesser evil than substitution is often justifiable. F. A. C.

Alcohol, its Uses and Abuses.

Progressive Medicine, December 1st, 1904, gives an excellent epitome of the literature on this subject during the past year. The injurious effects of even small doses of alcohol have been beautifully shown by some experiments carried out by Prof. Kraepelin, of Heidelberg. In a perfectly healthy individual so small a dose as an ounce of ethylic spirits (two and a half ounces of whisky) produces an appreciable effect upon sight,

hearing, taste, smell and temperature, as well as cardiac, muscular and mental capacity. In all cases of inebriety there are marked changes in the capillary and vascular system of the brain. The walls of the vessels show fibrinous deposits and sclerosis, while the nerve cells and dendrites are altered and retracted. The kidney, liver and heart show fibrous and fatty deposits.

The records of the large assurance companies of Great Britain show that abstainers constitute by far the better risks the advantage in their favor being from 25 to 45 per cent. If the death rate among non-abstainers be stated as 100 that of abstainers is 72.8 and from cancer, 72. Chronic alcoholism in the fathers seems to have an unfavorable effect upon the nursing capacity of their daughters.

It has long been a current belief that alcohol was a necessity for Europeans serving in tropical countries, but the experience of Major Fribig, in the Dutch East Indies, contradicts this. Since the soldiers there were allowed the option of drawing money instead of their daily wine, there has been a notable increase in the resistance to disease and fatigue.

Externally alcohol (70 to 95 per cent.) is highly recommended for local inflammatory conditions as a wet dressing, changed every twelve to twenty-four hours.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Thyroidectomy in Exophthalmic Goitre.

Charles H. Mayo, of Rochester, Minn., in an article in the *Medical Record*, of November 5th, 1904, discusses the surgical treatment of Graves' disease, based on a series of forty cases on which he has performed partial thyroidectomy. The experiments of Dr. Crile on blood pressure, shock and resuscitation would seem to indicate that blood pressure is maintained by the vaso-motor system acting upon the vessels, and that the normal tone of the blood-vessels is, in great part, sustained by the opposing action of the secretions of the thyroid and adrenal glands. If this supposition be correct, it would readily explain the effects of an excess of thyroid or suprarenal secretion. Thus the absence of thyroid tissue in the young, from the unopposed effects of the suprarenals, causing contraction of all peripheral vessels, would explain the retarded growth and development of cretinism. In adult life the same conditions would cause intellectual degeneration and myxedema.

Although the continued exhibition of thyroid extract does not produce Graves' disease, nevertheless some of the most prominent symptoms may be thus produced. Mayo points out that the thyroid, so employed, is abnormal and altogether unlike the internal secretion of the gland absorbed by the lymphatic system, these acting in great part as ducts. The hard and practically dry gland, as found in exophthalmic goitre, would indicate unusual activity and rapid delivery of the contents of the acini into the circulation, whilst in the colloid cystic goitre the secretion may be retained, at least, in part. Even in cases of exophthalmos, without goitre, Mayo draws attention to the fact that a careful examination usually discloses a small unilateral or bilateral, deeply-seated tumor, which is firmer than normal. The author has noticed that in the X-ray treatment of cervical adenitis the lymph vessels were greatly sclerosed, and has on these grounds used this treatment in a number of cases of exophthalmic goitre with good results—the general nervousness, tremor and tachycardia being markedly benefited, and the exophthalmos the last symptom to show any improvement. He therefore gives the X-rays a place in the treatment of Graves' disease preparatory to operation. Mayo has operated on forty cases with a mortality of 15 per cent., and if two moribund cases be excluded from his total, the mortality is reduced to 10 per cent. He operates on all cases in which the general condition is fair, but if the pulse runs from 130 to 160, with sudden fluctuation in tension and rapidity, if anemia or edema of the feet are present, the patient is put on belladonna treatment for some days. The more severe types are treated from two to six weeks by X-ray exposures in addition.

Mayo attributes the thyroidism which occurs after partial removal of the gland to absorption of the wound serum with some thyroid secretion in suspension, and he therefore drains these wounds as freely as he would septic processes. He disputes that thyroidism is caused by rough handling of the gland forcing the secretion into the general circulation during operation, owing to the fact that the symptoms do not immediately follow on operation. He advocates suprarenal extract, atropia and morphine for the tachycardia and other symptoms of thyroidism following operations on the gland. The author draws attention to the danger of wounding the right recurrent laryngeal nerve, owing to its intimate relationship to the inferior thyroid artery of that side. The left nerve is situated one-quarter of an inch further back and not so liable to injury. Mayo advocates the Kocher collar incision, giving preference to ether as an anesthetic, preceded by the hypodermic injection of one-sixth grain of morphia. In serious cases cocaine infiltration may be used. C. B. S

Substitute for Rubber Gloves in Surgery.

Dr. F. H. Wiggin, of New York, advocates the following as a satisfactory substitute for rubber gloves:

Alcohol (96%)		
Ether	āā	℥ xlix. ss.
Celloidine		℥ j.

M. et ft. sol.; adde ol. ricini ℥ ss.

This gives a thick, firm, dry, elastic coating, which does not crack, is insoluble in water and ordinary alcohol. It may be removed by washing the hands in a mixture of equal parts of alcohol and ether. C. B. S.

Position of Kidney after Nephropexy.

Dr. Augustin H. Goelet, Professor of Gynecology in the New York School of Clinical Medicine, states that it is essential that a movable kidney should be fixed in its proper anatomical position in order to restore its normal action, which has been perverted by the inflammation brought on by its downward displacement. He does not regard the mobility of the organ as the cause of the usual symptoms complained of, but considers the nephroptosis as of prime importance. He rationally concludes that when the kidney is fixed in a position lower down than normal, permanent disability is induced, for whereas before operation the recumbent posture permitted normal replacement and relief from symptoms, whilst after nephropexy in an abnormal situation, no respite is possible from the symptoms for which the operation was undertaken. In women an additional objection to fixation too low down, below the rib, is that injurious pressure by corset or clothing is permitted, and the kidney cannot escape as before, and such compression is a constant source of irritation. Hence a low fixation leaves the patient and kidney in a worse position than before operation. The author believes that splitting or peeling the capsule is unnecessary and unwise, because firm attachment can be secured without such mutilation, and that the normal functions of the kidney may be re-established and the associated nephritis subsides, provided the operation is performed sufficiently early, before structural changes have taken place. He does not consider that the usual operation of stitching the kidney, or its partially detached fibrous capsule, to the muscles exposed in the wound is satisfactory, as this procedure must necessarily cause attachment too low down. Dr. Goelet advises bringing the sutures out and tying them on the surface at the upper angle of the wound (*Jour. Am. Med. Assn.*, Nov. 7, 1903) as the best method of securing the kidney in its normal position. He reports 184 consecutive nephropexies without mortality, and without a failure to secure permanent fixation, with subsequent relief of symptoms. C. B. S.

The Function of the Cecum and Appendix.

The Huxley lecture on "The Function of the Cecum and Appendix," by Sir William Macewen, as it appears in the *British Medical Journal*, October 8th, 1904, page 873, is most interesting and instructive, and is well worthy of careful perusal in its entirety.

The lecturer is not disposed to believe, as undoubtedly many surgeons, anatomists and physiologists do, that the appendix is useless as far as the human economy is concerned. He claims for the cecum and appendix an important digestive function, by virtue of the profuse secretion of *succus entericus*, which comes from the numerous crypts of Lieberkuhn, which their lining mucous membrane contains, and the presence within them of numerous micro-organisms, and also that the attacks of "indigestion," which so frequently precede appendicitis, are very often cecal in nature, the pain being referred to the region of the umbilicus through the superior mesenteric plexus of nerves, some of the terminal branches of which supply the appendix.

Attention is called to the presence of large ceca in some herbivorous animals, and in which a large proportion of the digestive processes occur, instead of being completed in the stomach and small intestine as in many carnivorous animals where the cecum is either absent as a distinct pouch, or is very small, and it is asserted that in man, who is alike herbivorous and carnivorous, the cecum and appendix supplement the action of the stomach and small intestine in the digestive processes by further action on the partially undigested material poured into the cecum from the ileum.

During observations made on a patient whose anterior cecal wall was removed by an explosion, it was found that shortly after a meal was given, a copious alkaline secretion was poured into the cecal cavity from the crypts of its mucous membrane, and through the orifice of the appendix, and that such secretion was more abundant just previous to the pouring of the ileal contents into the cecum through the ileo-cecal valve. This valve was considered to be under some such reflex control as is ascribed to the pylorus, emitting only small quantities at a time, and thus allowing a thorough saturation with the cecal and appendiceal secretion. Such contents were observed to be directed over the appendiceal orifice towards the lower part of the cecum, and such movements occurred as satisfied the observers that both the cecum and appendix possessed the necessary neuro-muscular mechanism to regularly empty themselves.

For some time it has been considered that the micro-organisms so constantly present in the intestine, especially its lower part,

either favor or assist the final processes of digestion. Their abundance is especially marked in the cecum, and in the appendix as well. Various competent observers have found many existing in the normal appendix, and so we find Sir William Macewen opposing the view of non-utility of the appendix and ascribing to it the ingenious function of a human "culture-tube," producing and pouring into the cecum such micro-organisms as may take a place in the intricate and inter-dependent processes of digestion, and so long as the vitality of these parts remains intact, which will be the case so long as they functionate properly, no harm will ensue.

Were this theory correct it can readily be understood how great would be the light thrown upon the causation and pathology of appendicitis.

Abrogation of its function by such causes as improper feeding, over-eating, too hasty eating, associated with non-preparation for meals from a mental point of view, or the present day neglect of the digestive and eliminative processes generally, is apt to result in the unnatural lodgement of partially undigested material in the cecum.

It is probable that if the appendix were at all times capable of emptying its contents regularly and freely into the cecum its disease would be rare. Certainly appendiceal colic would cease to exist, and undoubtedly changes of an inflammatory nature would at least be uncommon. Hence one might be justified in ascribing the cause of appendicitis to some form and degree of obstruction as may be brought about by the inadvertent passage of some undigested material into the appendiceal lumen, the unnatural lodgement of intestinal contents in the cecum, or the presence of such conditions as stenosis, kinking, twisting of the appendix, or the formation of surrounding adhesions, any of which may have been due to previous changes of a mild inflammatory type. Any such obstruction persisting, it only needs the ever-present micro-organisms to give rise to the pathological changes characteristic of the various clinical forms of appendicitis. Where the obstruction is in the cecum it would seem that primary involvement of the cecum occurs, the appendiceal inflammation being brought about by extension and congestive obstruction in an analogous manner to inflammatory disease of the middle ear complicating, or subsequent to, disease of the pharynx, and as otitis media may persist after the normal state of the pharynx is restored, so may appendicitis persist after the cecum has recovered itself owing to the removal of obstructive material as the result of spurious diarrhea, or the action of an administered enema or purgative.

From the fact that so many appendices have been removed

in recent years and without any apparent ill-effect, it would appear that for the maintenance of a healthy condition the appendix is unnecessary, yet it is now generally acknowledged that various other portions of the body may be removed without interfering to any marked extent with the general health, and it is but reasonable to agree with the lecturer when he states that if the appendix possesses no known function one has no right to assume that it is functionless.

It is impossible to transmit to this brief article even a small amount of the force and weight of the lecture, so that one would strongly advise a careful study of the thoughts expressed therein by Sir William Macewen, who, as the Huxley lecturer seems to have kept the Huxley "truth motto" constantly before him, admitting, as he does, that sufficient time has not elapsed for the thorough attestation of his observations and beliefs.

On the strength of what comes to one from this prominent authority, through his admirable lecture, one may venture to suggest that there is the faintest possibility that time and future observation may place the appendix in the now largely grown list of body structures which are possessed of an internal secretion; and, furthermore, that such may be of the nature of micro-organismal products which, though unnecessary for the maintenance of a healthy existence, exercise some controlling influence in the general metabolism of the body.

F. W. M.

"Floating" Kidney.

The tendency of modern writers has been to make synonymous the terms "movable" and "floating" as applied to displacements of the kidney. In the *British Medical Journal*, June 18th, 1904, page 1415, Dr. Newman recalls the fact that there is an anatomical difference between the conditions thus designated that ought to distinctly render the terms non-synonymous.

Of the two conditions "movable" kidney is by far the more common. In origin it is usually acquired. In all its movements it is behind the peritoneum, and in the operation for its relief it may be exposed without opening through that important structure. On the other hand, "floating" kidney is an uncommon condition. It is congenital in origin, a mesonephron being present. Its movements occur within the peritoneal cavity, and its exposure necessitates an opening through the peritoneum.

Clinically the two conditions are indistinguishable, as no dependence can be placed on the amount of movement present. However, it seems fitting that the two conditions should be designated separately, and during operations for the relief of a

displaced kidney it would be interesting if surgeons would investigate carefully the actual condition present in order to determine the absence or presence of a mesonephron.

The cases reported in which a mesonephron was present are so few that one is led to believe that the proper investigation of this point has been neglected. Dr. Newman reports a case of "floating" kidney in which nephrorrhaphy was successfully performed. During the operation a distinct mesonephron was found to be present. F. W. M.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

Gonorrheal Salpingitis—Recovery After Removal of Tubes. (LENARD A. BIDWELL, F.R.C.S., *British Journal of Children's Diseases.*)

The trouble occurred in a six-year-old child, and began with vulvitis and painful micturition. Five days later there was a painful swelling over the flexor tendon sheath of the right foot. This was incised and a clear fluid escaped. A few days later pus was seen oozing from the os uteri. On June 28th the temperature was 103°, and there was severe pain in the abdomen with rigidity of the right rectus muscle. The right side of the abdomen was swollen and very tender. Gonococci were found in the vaginal discharges. At a consultation it was decided that salpingitis was present. For a time the patient was better, the symptoms becoming less acute. Later, however, the child became worse, and at operation a double purulent salpingitis was found. The tubes were removed, but the ovaries were saved. The wound healed nicely, but the vaginal discharge continuing, another examination showed that pus was still oozing from the uterus. Under chloroform the uterus was curetted. Within a week the discharge ceased and a perfect recovery followed.

In commenting on the case the writer suggests that if the uterus had been curetted when pus was first seen issuing from it, salpingitis might have been prevented (?) The trouble in the tendon sheath was considered to be gonorrheal rheumatism.

W. J. G.

Gonorrheal Inflammation of the Uterine Appendages—Spontaneous Recovery. (DR. GEO. CARPENTER, in the *British Journal of Children's Diseases.*)

Mary W., aged three and a half years, was brought to the outdoor department of the Evelina Hospital with a vaginal dis-

charge of six weeks' duration; for pains in the lower part of the abdomen which was swollen; and for frequent micturition. The vulvar discharge contained gonococci. On a bimanual examination per rectum the uterine appendages were found to be involved. On the right side was found an irregularly shaped elastic tumor attached to the uterus, and in size would be one and a half inches in length and three-quarters of an inch in width. On the left side a fusiform swelling was made out, apparently at the extremity of the Fallopian tube. A month later another examination was made when the left side was ascertained to be natural, while the swelling in the right side had much improved. A month later examination was again made, when the right side also was found much improved, but the vaginal discharge was as bad as ever. Three months after, the os uteri was examined with a Ferguson speculum made expressly for this case. There was no discharge, but the cervical mucous membrane was reddened, and the vagina also in patches.

The author considers that it was a case of gonorrheal salpingitis which had spontaneously recovered. The case is recorded as interesting and also as an example of the value of the bimanual method. The Frenchman Marx is of the opinion that these infantile gonorrheas are apt to rekindle at puberty or at marriage and the husband be credited with it. W. J. G.

Gonorrheal Infections in Children. (Editorial, the *British Journal of Children's Diseases.*)

It was Bland Sutton who first called attention to the importance of the diseases of the Fallopian tubes. Many infants at the breast die annually from intoxications. In many of these cases the mother's milk is found teeming with micro-organisms. The primary focus can only be surmised to be a purulent vaginal discharge which persists long after the lochial flow. In a few cases a mammary abscess is found, but the micro-organisms from such an abscess are less virulent, and by weaning the child can be saved.

The causation of vaginal discharges in children is less frequently due to defilement by a male than is generally supposed. The female child sleeping with both or either parent comes in contact with dirty night dresses or contaminated bed-clothes, or the child may become infected at the water closet. This mode of origin is often ridiculed, but in a poverty-stricken home where gonorrhea works its ravages, there are few of the bed-clothes and underlinen from which the gonococcus may not be cultivated. Again, we have to consider how the child may sit about on a dirty rug or stool previously contaminated by a drunken parent; the use of a common towel; the appropriation

by a girl at her primary menstruation of a diaper previously employed by her mother, sister or aunt.

When we consider this question in relation to the diminished birth-rate, to infant mortality, to blindness from ophthalmia, to septic intoxications in infants, we are led to believe that the suffering from gonorrhea at all ages will demand legislation on behalf of the innocent prior to marriage and to avoid the communication of such disease to their offspring. W. J. G.

Editorial.

THE MODERN NURSE.

The status and character of our modern nurses have been much discussed recently in medical journals of both the old and new worlds. In a recent number of a French journal a Lady Superior in the Pasteur Hospital, Paris, gives her impressions of London hospitals and nurses, derived from personal observation during her recent visit. She was especially struck by the homelike character of the hospitals, where evidently the main desire is not to keep down expenses, but to promote the comfort and well-being of the patients. The well-lighted wards, the pictures, the flowers, and the cheerful fire-places present a striking contrast to the barrack-like appearance of Paris hospitals. She was greatly struck by the appearance, manners and efficiency of the nurses in all the hospitals which she visited. She noted the high moral character, the sense of duty, and the technical skill of the nurses. She is confident that they take their profession seriously, love their work, and evince a keen interest in their patients.

It is hinted, however, that English nurses have certain defects. The perfection of their training is apt to give them an overweening sense of their technical knowledge, and thus give rise to a tendency to attach an exaggerated importance to such knowledge, and to relegate the womanly qualities of tenderness, sympathy and tact to a lower place.

The *British Medical Journal* in commenting says that the French Nursing Superior has here put her finger on the weak spot in our otherwise admirable system of nursing. "The new nurse with the half knowledge that makes her magnify her office is a source of danger in the sick-room, a grievous burden to the household, a nuisance and too often a hindrance to the doctor.

"The nurse here has not yet set herself up as a professional rival to the physician as she has in America. This is probably, however, not due to a less faulty impression, but to the fact that the 'Graduated Nurse' is still unknown among us."

Many physicians of Toronto are comparing our newest nurse, the three years' graduate, with the two years' graduate

of a few years ago, and are wondering which of them possesses more of the "womanly qualities of tenderness, sympathy and tact," which are, after all, the important qualities in a good nurse.

FUNCTION OF THE THYROID AND THE PARATHYROID.

It has been suggested by numerous investigators that the parathyroids have a different function from the thyroid gland, and that it was the removal of the former which gave rise to the acute symptoms which arise in certain cases. Kishi (Virchow's *Archiv.*) however considers that the parathyroids consist of embryonic thyroid tissue, which may, when the thyroid is destroyed, be transformed into normal thyroid tissue. As long as the thyroid performs its function the parathyroids lie dormant, but when the former organ is injured or removed the parathyroids replace it and perform its work more or less efficiently.

Kishi also carefully studied the blood of animals after thyroidectomy, and found that the red corpuscles rapidly decrease in number, while the leucocytes increase even as high as 38,000. He concluded that there was a toxic substance, probably a nucleoproteid, present in the blood under ordinary conditions, which was taken up by the thyroid and destroyed. This toxic substance he believes to arise from the nuclei of meat cells, taken into the body as food. It is, however, decomposed by the thyroid gland into bodies whose composition is harmless to the animal economy.

This theory would explain why it is that carnivorous animals die immediately after a thyroidectomy, while herbivorous animals lapse into a chronic condition. The toxic nucleoproteid is present in large quantities in animals that eat meat, and they are overwhelmed by it when the thyroid is put out of action.

The corollary which could be attached to this is that no meat should be given to patients after a thyroidectomy till the parathyroids have time to assume the function of the whole or part of the thyroid destroyed.

TORONTO GENERAL HOSPITAL.

Mr. George Gooderham has retired from the Board of Trustees of the Toronto General Hospital after a service of about twenty years. The announcement of his retirement is accompanied by the statement that he has promised a sum of money to the hospital in connection with the large scheme of extension now in view. It is proposed to raise not less than $1,000,000 by private, civic and Government subscription. The desire of the friends of the hospital is to erect a number of pavilions which, when completed, will form one large hospital for all classes of disease excepting the infectious, and also for maternity cases. It is expected that the new institution, which will be erected and managed chiefly in the interest of the sick poor, will also afford excellent educational facilities to the Medical Faculty of the University of Toronto. The advantages and possibilities of such a hospital for teaching purposes have been pointed out by Dr. Osler and many other distinguished visitors to Toronto in recent years.

The donations of Mr. Cawthra Mulock and Mr. George Gooderham will form the nucleus to a fund which, it is hoped, will reach a goodly size within two or three years. The Ontario Government has appointed Mr. Cawthra Mulock a member of the Board of Trustees of the Toronto General Hospital in the place of Mr. Gooderham, resigned.

BRITISH MEDICAL ACT.

A bill of considerable importance was introduced by Gen. Laurie in the British House of Commons last year, which, however, only received the first reading. It is expected that if it is favorably considered by the profession in the Colonies the bill will be reintroduced at the coming session. The bill provides that where examinations and courses of education at the principal Colonial universities are in all respects similar to those in the United Kingdom, the graduates from Greater Britain shall be eligible to serve in the naval and civil services of the Empire. Surgeons of the highest standing in Canada holding commissions from His Majesty in the Militia volun-

teered for service in South Africa during the war, and a complete field hospital was offered by Canada. In both cases the War Office refused to accept such service, on the ground that it was contrary to the Medical Act of 1858 to permit a surgeon on the Colonial register to attend professionally to British troops. The object of the proposed bill is to relieve this disqualification.

NOTES.

Reunion of Toronto General Hospital Surgeons.

Eight members of the House Staff of the Toronto General Hospital in 1892-93 had a pleasant reunion, December 29th. when they dined at the Toronto Club. Among those present were Dr. Charles O'Reilly, the Guest of Honor; Doctors H. B. Anderson, Herb. Bruce and Harry Parsons, of Toronto; Dr, J. N. E. Brown, of Dawson City; Dr. Middleboro', of Owen Sound; Dr. A. S. Tilley, of Bowmanville; and Dr. H. J. Way, of Chicago.

Dr. O'Reilly congratulated his hosts, one and all, on their great success during the past twelve years, and on their devotion to the honorable profession, four having taken English degrees and two the F.R.C.S., by examination, after having spent a year in the Toronto General Hospital.

Since 1876 some 220 house surgeons have been on duty in the Toronto General Hospital for one year and longer, and it is intended to inaugurate at once an "association of ex-house surgeons." The mortality has indeed been remarkably small, only eight of the 220 having died in twenty-eight years.

The American Journal of Nursing.

This journal, now in its fifth year, is owned, edited and controlled entirely by nurses, and is standing for higher education for nurses, both preliminary and technical. The Christmas number contains many interesting articles, has many illustrations and presents a remarkably good appearance.

A meeting of the Queen's University Alumni Association of Hamilton was held in that city, Dec. 16th, and a committee was appointed to co-operate with the Committee of the Hamilton Presbytery in raising money to increase the Queen's University Endowment fund. Dr. Malloch acted as chairman of the meeting.

DR. OSLER'S ADDRESS TO THE CANADIAN CLUB.

Dr. William Osler addressed the Canadian Club at their luncheon on December 29th. The reception to Professor Osler by the four hundred members who were present was most enthusiastic.

Professor Osler, who was introduced as one who had become the first physician within the British Empire, was received with loud cheers. He addressed his hearers as "fellow-countrymen," and said it always gave him great satisfaction to return to his old town, where he had received his early education, and where he had so many friends. Taking up the serious part of his subject, Dr. Osler said, as Canadians they had three relations to consider—the country to the south, the motherland and their own Canada. Fortunately, or unfortunately, the nation to the south was one of the most powerful on earth. A Briton should be proud of it, for no other nation, ancient or modern, ever had such a child.

A very serious and important influence was that of gravitation, the attraction of the larger body upon the smaller, which caused an incessant dribbling over the border of their young men. A million Canadians were in the States, many in prominent positions in finance, and in the professions, particularly in medicine and theology. There they had been successful by reason of two special qualities, industry and thoroughness, the only qualities worth anything in the make-up of a young man. If it were only in the matter of draining away the young men, it would make no difference, as plenty were left to run the country. But a more serious loss was that of the young women. He had a patient once, a neurasthenic young man of thirty or so, whose heart was not settled. Dr. Osler asked him why he did not get married. "Because all the girls I wanted have gone to the States," was the reply. Of 651 women engaged in nursing in six of the great eastern hospitals, 196 were Canadians. an enormous proportion, almost one-third.

"Something should be done," said Dr. Osler, to stop the loss of the mothers of the country. He suggested two ways. Introduce a tax on bachelors. At twenty-five or twenty-six, the man who had not a family to support ought to be helping the other fellow, and such a tax would be a reasonable and rational political measure. The other way was an export tax of $100 on every girl who left Canada.

"She's worth more," the doctor remarked, while the club hilariously assented. She was worth $1,000 to the country, and it would pay to give her family that to keep her at home.

In the States, those who went over were taken in and well treated. Never was it asked where did a man come from, but

what could he do? He was impressed with the extraordinary kindness of the feeling there. They were not treated as foreigners, and after twenty years he could say that not once had the question come up.

They might take a lesson from that, for he had noticed a carping spirit in Canada against Americans. It ill became them to speak in any way derogatory of those among whom a million of their own lived as brethren. He would urge all Canadians, when they thought of the war of the revolution, to think how much that war had done for the Mother Country and for Canada, when it brought over the picked blood of the United Empire Loyalists. When they thought of the Fenian raid they should think of the silent raid going on ever since from Canada, and keep their mouths as with a bridle. When they thought of the Alabama claims, they should think of the thousands and thousands of dollars brought over every summer by Americans to Canada. When they thought of the Alaskan boundary, they should think of the trek to the south of their own citizens. He hoped they would live closely and comfortably, in harmony.

British relationship was a very delicate problem. A great many miles separated them, and the tie was, after all, only a tie of sentiment. He said only, but there was no stronger tie. Sentiment ruled them in every relation of life. It sent their young men to battle in South Africa, and what stronger was needed? Great care was needed by the politicians of the old country and of this to promote a proper and organic unity. Only three courses lay before them, annexation, independence, or some measure of imperial federation. Great nonsense had been talked about the difficulties connected with federation, b t he could see no remarkable difficulties in contrast with the advantages. The chief difficulty was that Britain beyond the seas wanted everything and would give nothing to the motherland in return. They had to take a share in the responsibilities and could not ask the Mother Country to be constantly providing for her children.

What were the ideals they should cherish for their own country? He was glad to speak to them as men. Men under forty cherish ideals. After forty they were not so easy to cherish. It was sane and reasonable to think of themselves as a strong race, and they were satisfactorily situated for the development of one strong in body. Rarely had a strong nation appeared elsewhere than in the north. The cold and rigor of the winter was much to their advantage, and would produce a stronger type than any other on the continent. In their generation, by far the most virile nation would dwell north of the Great Lakes. The amalgamation and commingling of the heterogeneous

elements of English, Irish and Scotch was the best mixture the world had seen. He would get it arranged by Act of Parliament that every fourth Upper Canadian should marry a French-Canadian girl, and the future of the race would be assured.

They wanted a strong race mentally. It was easy to grow corn and potatoes, but they could not grow brains.

"Brains come hard and come high." But they could foster elementary education by well-equipped schools and teachers. No problem was more important than that of getting good masters, for it was not good for the boys to be brought up under women. They must pay better salaries, and make their teachers feel they were doing useful and honorable work for their country, with a prospect of a provision for old age and family. The university problem was rapidly approaching solution, and the rapidity with which the provincial University was growing made him hope it would get to the breast of the province and not be bottle-fed as it has been so long.

Canadian literature, as represented in the magazines and journals, was advancing, and in one line particularly, not much thought of by business men, Canada reached a high level. Poetry was a very important matter, and they should not look disparagingly upon it. Where there is no vision the people perish, had been said of old, and the vision came not so much to the people as by the poets. He would advise them when they had a young fellow scribbling verses in the office to raise his salary.

The most important thing was to grow a strong race morally, and it was the hardest of all. He did not think Canada immoral. Homicides were less frequent, and drunkenness not so prevalent, though some of them with Scotch fathers might have a little tissue thirst. Illegitimacy was rare, and divorce rarer perhaps than they would like it to be. Morally the country had made a good start, but there was far too much evil speaking, lying and slandering in connection with political life. It was entirely superfluous and unnecessary. Young men in this atmosphere of slander and hostility towards opponents suffered great harm. He regarded it as an infinitely worse vice than drunkenness. The only way to meet it was simple indeed.

They should deal with political opponents in an every-day Christian spirit, or if not in the character of St. Paul's noble Christian, at least in that of Aristotle's true gentleman. The young were taught to distrust by this mud-slinging, and that very easily passed from the sphere of politics to distrust of one's neighbor, and to a general lack of human sympathy and brotherhood, which they should have to one another as Canadians.

OPENING OF THE NEW BUILDING OF THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

It was a happy coincidence and strikingly appropriate that the newly-acquired building of the Ontario Medical Library Association should be formally opened by Dr. William Osler, of Johns Hopkins University, Baltimore, whose recent elevation to the regius professorship at Oxford is a source of pride and satisfaction to his Canadian fellow-countrymen.

The exercises which prefaced the formal opening by the distinguished guest, commenced at four o'clock on the afternoon of December 28th, in the Council Room to the right of the entrance of the new library, which is situated at No. 9 Queen's Park. Dr. J. F. W. Ross, President of the Association, was unavoidably absent, but among those present were Dr. R. A. Reeve, Vice-President of the Association and Dean of the Medical Faculty; Dr. N. A. Powell, Librarian; Dr. Herbert Bruce, Treasurer; Dr. Herbert Hamilton, Secretary; President Loudon and Mr. Chester D. Massey.

Dr. Reeve, in welcoming the members of the association to their new home, considered it a most happy coincidence that Prof. Osler was in the city at this time, for the association owed a great deal to him. Prof. Osler was the largest contributor except one, Mr. Chester D. Massey, who had supplemented his original donation with a gift of five thousand dollars. Prof. Osler gave them more than his gift of one thousand dollars, however, for he had given words of encouragement and advice that were worth more than money, and also some additions to the library. It was appropriate that he should open the library, not only as a large contributor, but as a liberal contributor to the literature of the profession. He had written one of the most popular works on medicine, a work that was not only widely read, but consulted by medical men the world over.

Dr. Osler rose amid applause. It gave him great pleasure to be present, he said, and declare the building open. It was for their intellectual refreshment, always in order for medical men, and for friendly and social intercourse, also always in order. The institution would have a dual influence, a very important direct influence coming first. They could all appreciate their deficiencies. It was a poor doctor, indeed, who had not borne in to him the fact that he could be much better. There was but one way of improvement, the careful and intelligent study of the cases before him. They talked of large experience and years of practice, but these were not necessarily an advantage. Years might bring sterility. Many did not study, and the

older they grew the worse doctors they got to be. They could not study without books, and a good reference library was almost impossible for one doctor to gather together. It was better to subscribe to such a library, and have access to all the periodicals and literature of the profession and keep up his cases by reference to the experience of other men.

Such a library fostered the best traditions of the profession, which, without disparagement to others, he considered were older, better and nobler than those of any other profession. They would remember the Hippocratic oath and the high aims of the Greek physicians, which never were equaled, and which were theirs to-day. In a home of this sort such traditions should be nurtured and fostered. There were few finer than their own local traditions, and in such a place portraits of old notables of the profession should be hung, and books, papers and manuscripts obtained from their families and stored there, as was done in Boston. The family papers of Dr. Widmer were an example, and all of these should be in a fireproof safe. Records of Dr. Bovell, Dr. Hodder and many older men should, and no doubt would, there find an appropriate storehouse.

Such an institution must have an important effect in creating a spirit of fraternity in the profession. There was too much antagonism, yet it was astonishing what a change had taken place in the younger generation. Some of the old men had bad teachers. In the Old Country the students had had bad examples of hostility among the prominent medical men, and who could blame the student who was tainted by their action? "In heaven's name," asked Dr. Osler, "what can we expect from a young man taught under such conditions?" In urging a more fraternal sentiment in the ranks of the profession, Prof. Osler said: "Never believe what you hear against your brother practitioner—not even if you know it to be true."

A little self-sacrifice would do them no harm and stimulate them in connection with the library. When they got past the bread-and-butter stage—and he knew some who had not got past the bread stage—they should help as they were able. The public ought to know how difficult it was for a doctor to save anything in the first twenty years of his practice. As they got on, such a building should become the object of their careful solicitude.

Amid bursts of laughter he rallied them on their tendency to stock investment and speculation. They had sunk too much in War Eagle and such ventures. Next time a promoter came along they should put $50 in Golden Fleece and $100 in the library, a much better investment.

"You might have had the handsomest building in America,

with marble front and Grecian candidate, if you had not been such fools financially. Doctors do not appreciate the fact that no doctor has any financial sense. He is not in the profession where he could get it." The library was only a start. They should have their rooms not only filled with books, but a hall built at the back. "God speed you in your future work," he concluded.

Chester Massey, in a short address, said he had a high admiration for the medical profession, and thought he had a good right to, for he had had more to do with them than most men of his age, and they had treated him well. There was a formidable array of physicians present, and he hoped their presence augured well for the new-born child which he might say was now receiving infant baptism. The grade of service and quality of their work the world over entitled medicine to rank next to theology. An ounce of prevention was worth a pound of cure, and as the ministers sounded their notes of warning it was the duty of the doctors to keep us out of trouble physically, and prevention should be the strongest element in their practice. Mr. Massey said that the contribution of which they spoke should be credited to his father's estate, and that he merited no more credit than the humblest citizen. He hoped they would find that they had builded better than they knew.

Dr. N. A. Powell, the Librarian, whom the chairman described as the man who had done more for the library than any other person, excepting the late Dr. J. E. Graham, was the next speaker. Dr. Powell was disposed to give a great deal of credit to Dr. Ross. Owing largely to the generous assistance of Mr. C. D. Massey, Mr. Timothy Eaton, Mr. E. B. Osler, M.P., and Prof. Osler, they had now, he said, a ten-thousand dollar building paid for, a lot under lease, and money on deposit to meet interest, as well as a small surplus. The association, too, was under indebtedness to the trustees of the University of Toronto for their generous consideration in connection with the lease. Extensive improvements were contemplated at the rear, and they must have money to carry on the work. The speaker announced that rooms would be named after the late Dr. Graham and Prof. Osler.

The building is very suitable for the present requirements of the library. The large north room will be used for meetings; the south front room for new books and visitors; the room behind as a coffee room. Upstairs there are five large rooms for stacking books and a large bathroom. A large brick building in the rear will be used for surplus books and magazines. Electric lighting and hot water heating are installed throughout the house, which has been known as the Thorne residence, 9 Queen's Park.

THE NATIONAL SANITARIUM ASSOCIATION.

The reports presented at the seventh annual meeting of the trustees of the National Sanitarium Association, which was held at the National Club, December 10th, were of a highly gratifying character, although the increasing demands on the institution call for a heavy outlay next year to insure the continued success of the work.

Sir William R. Meredith, vice-president, occupied the chair, and among those present at the meeting were Senator Geo. A. Cox, W. J. Gage, J. J. Crabbe, Hugh Blain, Edward Gurney, Dr. N. A. Powell, Fred Roper, treas.; J. S. Robertson, secretary; Dr. J. H. Elliott, physician-in-charge of the Muskoka Cottage Sanatorium, and Dr. C. D. Parfitt, physician-in-charge of the Muskoka Free Hospital for Consumptives.

In the Muskoka Cottage Sanatorium the number of patients under treatment during the year was two hundred and eighteen, rather more than for the previous year, and much greater than any other year. The Training School for Nurses, established during the year, proved a success, and helped materially to strengthen the institution. The ages of patients ranged from fifteen to seventy. One hundred and twenty-five of the patients were between fifteen and forty years of age.

Dr. J. H. Elliott, physician-in-charge of the Cottage Sanatorium, keeps himself in close touch with the discharged patients, and in this way is able to gather much valuable information as to the effects of treatment. He states that of twelve patients discharged in 1897-98 apparently cured, ten are in perfect health after the lapse of six to seven years. The other two could not be traced. In the same year twenty-three were discharged with the disease arrested. Four had not been traced. Of the nineteen heard from, four have lapsed and died, and one has died of another disease. The remaining fourteen are as well as on discharge, or better, and almost all are at work. In the year 1898-99 twenty-one were discharged apparently cured. One has not been heard from. One lapsed and died: the remaining nineteen are in good health, and with one exception are at work. A summarized report shows that of cases discharged apparently cured, five or six years ago, 95 per cent are perfectly well, and of the arrested cases 55 per cent. are as well as on discharge, and 19 per cent. are in perfect health.

The Free Hospital.

In the Muskoka Free Hospital for Consumptives, which is situated a mile from the Cottage Sanatorium, the parent institution of the National Sanatorium Association, one hundred and ninety-seven patients were treated during the year. These have

come entirely from the wage-earning classes, and have comprised forty-five different occupations. Seventy-eight of these were from Toronto; sixteen from Hamilton, five from Ottawa, five from Montreal. The others represented many different parts of Ontario, as well as Nova Scotia and Prince Edward Island. Dr. C. D. Parfitt, in his report of the hospital, refers to the increase of accommodation during the year by sixteen more beds, but the congestion of the waiting list and the many calls for admission show the great necessity there is for further enlargement of accommodation.

In the report of the secretary, Mr. J. S. Robertson, special reference is made to the spread of municipal interest in the work of the Muskoka Free Hospital, shown in a marked manner by the contribution from Hamilton of $4,000 in cash, besides $800 from the Daughters of the Empire of that city in furnishings, and a further $400 that was expended in improving plumbing in the lavatory and wash rooms of the Hamilton and Wentworth County Pavilion. Ottawa has raised some $4,600, and steps were taken at the annual meeting to provide special accommodation for Ottawa patients. About $3,000 has also been raised in Montreal, and is being applied to the care of needy patients from that city.

The contributions received on maintenance and capital account for the Muskoka Free Hospital for the year have totaled some $26,000—the largest since the institution was opened. The expenditure for the year, however, has been very heavy. As other laundries refused the work of the two Muskoka institutions for consumptives, the building of a laundry and the installing of machinery became a necessity, and nearly $5,000 had to be expended in this direction.

The trustees, urged by the increasing calls for admission are most anxious to increase the accommodation of the Free Hospital to at least one hundred. This can be done only by an increase in contributions during the new year upon which the association has entered. The amount received through patients on maintenance account is very little. Of the one hundred and seven patients cared for during the year, forty-five were maintained absolutely free; forty-one were charity patients from the city of Toronto, nine from the city of Hamilton. One hundred and two patients contributed in part towards their own support, but the daily average amount per patient received from individuals or municipalities was only 47½ cents a day—2½ cents a day less than the usual hospital per diem allowance. Three hundred and eighty-seven patients altogether have been in residence in the hospital since it was opened less than three years ago. These figures make it very clear that the large bank overdraft against the institution that exists to-day, and hope of

further extension can only be overcome by a generous response from the public at large, as the institution is caring for the consumptive poor, without regard to creed or color, from all parts of the Dominion.

Financially the Muskoka Cottage Sanatorium has made the best showing of any year in its history. The equipment of the institution is complete, and great satisfaction exists among the patients. There is still, however, a bank overdraft on maintenance and capital account of the Cottage Sanatorium of some $15,000 which has yet to be overtaken.

Reference was made in the secretary's report to the statistics of the Secretary of the Provincial Board of Health, showing a decrease of 40 per cent. in the deaths from consumption in the last three years.

DEATHS FOR OCTOBER, 1904.

OFFICE OF THE SECRETARY
PROVINCIAL BOARD OF HEALTH.

The health of the Province for October, based upon the returns of 760 municipalities, may be considered highly satisfactory, as the deaths from all causes are 31 less than those reported for the same period last year, yet notwithstanding the population reporting is greater by ten thousand. The most pleasing features of the returns are the reduction in both cases and deaths of all infectious diseases, with the exception of *typhoid fever*, there being a case decrease of 23 per cent. and in deaths 19 per cent., as may be seen by the table below.

The total deaths recorded from all causes are 2,091, representing a reporting population of 2,092,300, which makes a death-rate of 12 per cent. per thousand, as compared with 6,122 deaths for a population of 2,081,534, for the corresponding period of last year, which gave a death-rate of 12.2 per cent. Smallpox has almost disappeared, only one case being reported for the month.

Scarlet fever has also reached a very low point, there being 177 cases and 10 deaths, or a case decrease of 23 per cent.

Diphtheria.—As may be seen by the returns, this disease has shown the greatest decrease of any of the infectious diseases, having dropped from 541 cases and 66 deaths to 239 cases, and 34 deaths, being a case decrease of 55 per cent. and in deaths 50 per cent. as compared with the same month a year ago.

Typhoid Fever.—The returns for this disease show but little change over the preceding month, but compared with October, 1903, there is an increase both in cases reported and also in

deaths returned, the increase in the number of reported cases, is no doubt due to the fact that medical practitioners are now aware of their responsibility, and more readily comply with the Act, the marked increase in deaths would indicate the type was more virulent.

In this connection, that portion of the quarterly report of the secretary as adopted by the Board on November 11th last, regarding water supplies, may be quoted, its perusal is worthy of careful consideration by individuals as well as municipal authorities.

It is, however, quite evident from the information to hand, that water pollution is the cause in every instance of the outbreak, which emphasizes the fact that the utmost care must be taken by health authorities to preserve their water supplies from contamination, whether the source be wells, lakes or stream. Too often the relative positions of the well or the intake pipe and the barn, stable or cesspool, are not carefully considered, and a long-continued rain storm results in water contamination by reason of the large amount of surface washings carried directly into the source of supply, with the inevitable result of an outbreak either of enteric fever or some intestinal trouble, according to the specific character of the bacterial infection. To prevent this pollution, it should be the duty of each local Board of Health to employ an intelligent officer to examine periodically into the conditions surrounding the water supply of each inhabitant, and, if necessary. take samples for laboratory examination; further, if pollution is found to exist, either the source of the same should be removed or condemned, and the supply from that particular source being unfit for domestic use, forthwith stopped.

Further, municipal authorities must be alert to the fact that what has been a source of good water supply often become, by reason of the rapid growth of the place, a polluted well, stream or lake, presenting a condition which at the time of the inception of the system was never considered. In the case of a town, the sewage emptied into a body of water from which the water supply is taken, has increased to such an extent that admixture takes place through the very increase in volume. In the smaller towns and villages without public systems, the pollution of wells and springs is an ever-increasing difficulty, and it behooves the individual householder and local authorities to bear this in mind and see to it, that these sources are not contaminated by the placing of the cesspools or stables in too close proximity to either, with the rapid growth of towns whereby fields become through the erection of dwellings, the abode of perhaps hundreds of persons, it cannot be expected that what in a primitive state is pure, will remain so.

The question here arises, what is the best course to pursue in regard to both public and private supplies.

In view of the fact that it is almost impossible to be your brother's keeper and have a control over how and where he shall dispose of his wash, sewage and excreta, and also that water is often polluted at a considerable distance from the point where it is taken for consumption. The one answer is to filter before use, for with the proper kind of filter in use, we have assuredly the best guarantee of always securing a drinking water which is likely to be at all times free from contamination. Though to maintain this standard in the case of corporations, it requires the local authorities to place the system in charge of a competent official, and this Board should not only require an annual report from the local authorities, but should, for the interests of the general public, institute a periodic inspection of both water and sewage systems.

I would particularly point out the danger of the pollution of milk supplies by reason of the use of the contaminated well water of the farmyard, which water is used to wash out the milk cans—too often I fear is the infection spread from this source, for the cool crystalline spring water of the farmyard is not always free from contamination, and therein often lurks the germ of typhoid.

Comparative Table for October—This Year and Last.

	1904.		1903.	
Diseases.	Cases.	Deaths.	Cases.	Deaths.
Smallpox	1	0	7	0
Scarlet Fever	177	10	232	9
Diphtheria	239	34	541	66
Measles	1	1	2	1
Whooping Cough	20	7	30	17
Typhoid Fever	265	63	178	43
Consumption	169	159	169	169
	872	274	1159	305

Chas. A. Hodgetts, M.D.,
Secretary Provincial Board of Health.

Personals.

Dr. Ward Woolner is practising at Ayr, Ont.

Dr. H. L. Burris is practising at Lacombe, Alta.

Dr. W. A. Wilson is practising at Dundurn, Assa.

Dr. Robert McCaffrey is practising at Armstrong, B.C.

Dr. C. R. Richardson will remove to 184 Bloor Street W. in May.

Dr. G. R. McDongah leaves on January 25th for a two months' trip to Algiers and the East.

Dr. W. T. King Dodds, of Cincinnati, visited his relatives in South Parkdale during Christmas week.

Dr. S. R. Richardson, of Eglinton, has been appointed an Associate Coroner for the County of York.

Dr. Charles Sheard, of Toronto, lectured before the Unitarian Club, at Webb's restaurant, December 19th, 1904.

W. A. Scott, M.B., F.R.C.S. (Eng.), of 576 Church Street, Toronto, has been appointed a demonstrator of Anatomy in the Medical Faculty of the University of Toronto.

Dr. Leslie R. N. Hess has recently recovered from a very severe attack of typhoid, and has begun practice in Hamilton, at 648 Barton Street East, in the office until recently occupied by Dr. Thomas Douglas.

Dr. J. M. Rogers, of Ingersoll, who with Mrs. Rogers and Miss Rogers, of Toronto, left on August 8th for a trip to England, has recently returned, and reports having had a most enjoyable visit. Most of his time was spent in the London hospitals, but he also visited Glasgow and Edinburgh infirmaries.

Dr. Sullivan announced at the banquet of Queen's Medical College, December 15th, his intention of resigning the chair of Surgery at the end of the present session. Fifty years ago he entered the College as a student, and the authorities of Queen's University will celebrate his Jubilee by conferring upon him the degree of LL.D.

Dr. Robert Koch, of Berlin, started for South Africa, December 17th, to engage in a further scientific investigation of rinderpest and other animal diseases. His last trip devoted to the discovery of these diseases was in behalf of the British Government. In the course of his investigations some problems arose which he had not time to solve. His present trip will be devoted to the study of these problems.

Obituary.

REGINALD PERCY VIVIAN, M.D.

Dr. Vivian died at his home in Barrie after a short illness from diphtheria, Dec. 8th, aged 30 years. He graduated from the University of Toronto in 1889.

ARCHIBALD S. KIRKLAND, M.D.

Dr. Kirkland died at Collingwood, Dec. 9th, aged 60 years. He was graduated from Victoria College in 1869, and practised for many years at Collingwood.

DAVIDSON MACDONALD, M.D.

Dr. Macdonald died in Toronto, Jan. 3rd. The cause of death was supposed to be dilatation of the heart following lagrippe. He was ordained as a Methodist minister in 1864, and graduated in medicine from Victoria University in 1873. The same year he went to Japan to establish the Canadian Methodist Mission. His headquarters for over thirty years were at Tokio. He was well known in Japan as both a physician and missionary, and was associate physician attached to the British embassy.

ROBERT HENRY SOMERS, M.D.

The many friends of Dr. Bob Somers in Canada were shocked to receive the announcement of his death in the Toronto daily papers of Jan. 4th. Immediately after graduating M.B. from the University of Toronto in 1896, he went to Iowa and settled in LeMors, where he soon acquired a large and lucrative practice. After exposure to cold on Dec. 27th he had an attack of pneumonia. The following Saturday and Sunday he appeared to be doing well, but the next day he took a turn for the worse and died on Tuesday, Jan. 3rd, aged 33. He was a son of Mr. Frank Somers, of Toronto, and was well known and much liked by his friends in this city and vicinity.

Book Reviews.

Diseases of the Liver, Gall-Bladder and Bile-Ducts. By H. D. Rolleston, M.D. (Cantab), F.R.C.P., Physician to St. George's Hospital, London. Philadelphia, New York, London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co., Limited.

This book by Dr. Rolleston is worthy of his reputation and experience, and will at once be accepted as an authoritative work. The research shown and the wide acquaintance with the whole range of medical literature on these subjects will be the admiration of physicians, and the thorough treatment given not only to every part of the subject, but to every detail, is a matter of great satisfaction, *e.g.*, the Section on Cholelithiasis. It is no uncommon thing to find ten or a dozen brief references to clinical cases on one page, each having a footnote mentioning the source, with the page, date, etc. A great many instructive cases are given from Dr. Rolleston's own practice and from St. George's Hospital. Diagnosis and treatment are the strong points of the book, which is thoroughly modern and scientific. The illustrations are of marked excellence, and the mechanical appearance of the book leaves nothing to be desired.

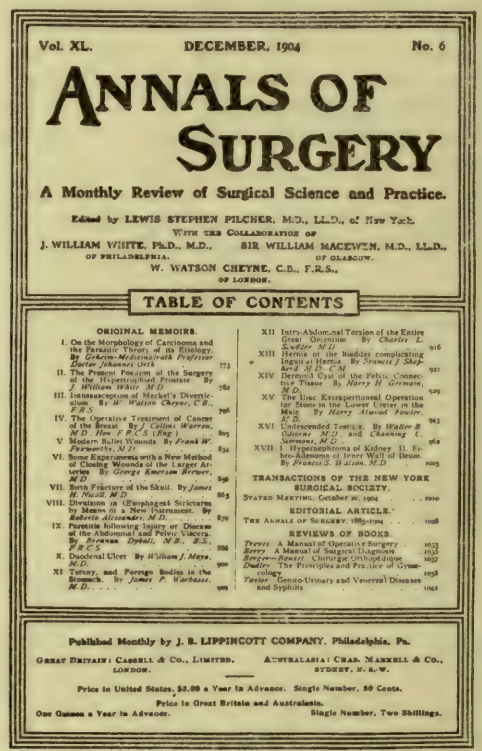
Progressive Medicine, Vol. IV., December, 1904. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 374 pages, 79 illustrations. Per annum, in four cloth-bound volumes, $9.00; in paper binding, $6.00; carriage paid to any address. Philadelphia and New York: Lea Brothers & Co., Publishers.

The contributors to this last volume of 1904 are Belfield, Bloodgood, Bradford, Landis and Steele, treating of diseases of the digestive tract and allied organs, liver, pancreas and peritoneum, anesthetics, fractures, dislocations, amputations, surgery of the extremities and orthopedics, genito-urinary diseases of the kidneys, and a practical therapeutic referendum, the latter being one of the best features of the book. In another part of the Practitioner appears an extract on alcohol which we have abstracted from the referendum. This volume is exceedingly helpful to the general practitioner.

The *Annals of Surgery*, in presenting their concluding number of the fortieth volume, do so in a most elaborate style, the table of contents of which we reproduce in miniature. There are 300 pages of original matter by authors of world-wide reputations on subjects diverse, but of the utmost importance. The illustrations, both half-tone and colored, are of the finest, and enhance the value of the articles very materially. The most

striking paper in the number is one by Prof. Warbasse, illustrated, in which he describes a case so wonderful that if the proof was not positive it would appear like a fairy story. To imagine that so many articles could possibly be swallowed and remain in the stomach, and be removed, is really beyond our belief, but the fact remains, and the case will pass into history as a record breaker.

The first number of the *Annals of Surgery* appeared January, 1885, and has continued ever since under the same editorial supervision. It is the only journal in the English language



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ANNALS OF SURGERY

A Monthly Review of Surgical Science and Practice.

Edited by LEWIS STEPHEN PILCHER, M.D., LL.D., of New York.
WITH THE COLLABORATION OF
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devoted entirely to surgical subjects. One can follow the great strides in surgery during the past two decades in the pages of the *Annals* and be astonished at the progress. It began in the days of Lister's Spray, and has seen the great success of antiseptic surgery, achieved practically upon the great and solid foundation laid by Lister, but elaborated and carried out by the many noble and grand surgeons since. The surgery of the past was wonderful, but the successes of the present are really due to the advantages gained by Lister's exposition.

The collaborators to the editor, Dr. Lewis S. Pilcher, have had much to do in making the *Annals* what they are. We can safely say the journal is unique, dignified and absolutely ethical. It is with the greatest pleasure that we congratulate the editors and present publishers on the completion of their fortieth volume, and wish them every success in the future, and may they long continue to publish the *Annals* in the same style and rich quality of articles.

Atlas and Epitome of General Pathologic Histology. By Dr. H. Durck, of Munich. Edited with additions, by Ludvig Hektoen, M.D., Professor of Pathology, Rush Medical College, in affiliation with the University of Chicago. With 172 colored figures on 77 lithographic plates, 36 text cuts, many in colors, and 371 pages of text. Philadelphia, New York, London: W. B. Saunders & Co. 1904. Cloth, $5.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

This new atlas in Saunders' Medical Hand-Atlases is a worthy addition to the series. All the accepted views regarding the significance of pathologic processes have been concisely stated, conflicting theories having been wisely omitted. The illustrations have been made from original specimens without combining different microscopic fields, extraordinary care having been taken to reproduce them as near perfection as possible. In many cases as high as twenty-six colors have been required to reproduce the original painting. In editing the volume, Dr. Hektoen has incorporated much useful matter; and unquestionably this atlas will be as favorably received as the previous volumes on Special Pathologic Histology. In our opinion, it will be found of unusual value to the medical profession generally.

Selections.

The Treatment of Bright's Disease.

Fully fifteen years ago the writer of this editorial began to advocate the employment of a more generous diet in the treatment of chronic renal disease, and increasing experience has firmly convinced him that a generous diet in the majority of instances of this malady, provided digestion is in fairly good order, produces much better results for the patient than the institution of a rigid milk diet which for so many years has been popular with the profession.

We are glad to notice that before the Section of Medicine of the last meeting of the British Medical Association Dr. Hale White, of London, took a strong stand in favor of feeding patients with chronic Bright's disease with an adequate quantity of nourishing material. The loss of albumen through the kidneys is easily compensated, and rarely amounts to enough to cause any drain upon the general system. In other words, albuminuria is not a symptom which requires the employment of remedies, dietetic or otherwise. He well says that under the impression that a small supply of milk is the best diet for diminishing work of the kidneys, the patient with chronic nephritis is starved, and his heart suffers starvation—a state of affairs made worse by the fact that, as the arteries thicken, the heart's work increases. Speaking of the most common type of chronic Bright's disease, namely, interstitial nephritis, he expresses the belief, in which we coincide, that as a rule the disease is treated too zealously, and that in the desire to spare the kidneys the patient is starved, with the result that the only means by which the degenerative process can be retarded, namely, the maintenance of general good health, is impaired. As we do not know of any articles of ordinary diet which can be considered really harmful in granular kidney, it is best to give the patient ordinary plain digestible foods containing the normal proportions of proteids, fats, carbohydrates and salts, just as it is necessary to give a person in health a similar mixed diet. It need hardly be stated that highly seasoned foods, or foods which are difficult of digestion, should be interdicted. Again, we are glad to note that Dr. White is in accord with us in believing that the limitation of these patients to a diet of chicken and fish without any red meat is entirely unnecessary. Not only does such a limitation do no good, but it is often harmful in the sense that it makes the patient consider himself seriously ill and also diminishes his appetite.

In connection with the treatment of chronic parenchymatous

nephritis, Dr. Hale White is even more emphatic, believing that a limited diet makes the misery of the patient greater, and as there is no possible hope of recovery, there is no use in making him suffer by depriving him of articles of food which he desires. As most cases of parenchymatous nephritis do not survive eighteen months after the beginning of the disease, do what we will in the way of treatment, the institution of a strictly limited diet simply adds to the discomfort.

Much discussion has existed amongst physicians as to the quantity of water which should be allowed patients suffering from Bright's disease. Some believe that the amount should be as small as possible on the ground that it engorges the vessels and increases the labor of the heart. That this cardiac influence is an important one we doubt, but as Edsall and others have shown that excessive water-drinking increases nitrogenous metabolism, and as the kidneys in Bright's disease are unable to deal with the products of normal metabolism, it would seem evident that excessive quantities of water must be harmful. On the other hand, there can certainly be no good result from depriving the patient of water to the extent of making him suffer.

The employment of a rigid milk diet in the treatment of Bright's disease is, we think, an illustration of the willingness of many physicians to follow the advice given them in text-books without a careful consideration of the pathological and physical conditions which may be present in the individual patient, and we think we can state, without fear of contradiction, that the physician of to-day who prescribes the red meats and insists upon a milk diet on the part of a patient suffering from chronic nephritis is following a fashion, rather than a method suggested by a careful consideration of the action of these foods in the body, and the condition of the kidneys and the tissues in general during the progress of this disease.—*Ed. in Therapeutic Gazette.*

Quinquaud's Sign of Alcoholism.

A new sign of chronic alcoholism has been lately brought to notice from several quarters, and as it appears to be well authenticated medical men may be glad to avail themselves of such information as it affords. The sign was first discovered by Quinquaud, but was not published to the world till seven years after his death. Since then Maridort and Fürbringer have both directed attention to it. The sign is elicited by making the patient place the tip of his fingers, well spread out, perpendicularly against those of the examiner, when, if the patient is of alcoholic habits, the examiner feels a number of slight shocks as if the phalanges of the patient were rapidly

pressed against each other and against the palm of the examiner. The sensation experienced by the examiners is said to be similar to that of crepitus such as is felt in arthritis deformans, but it has also certain indescribable peculiarities of its own. This crepitus can be heard by the stethoscope and sounds like friction, though in autopsies on patients who have exhibited it no undue dryness or roughness of the articular ends of the bones has been found. Nor has it any relationship with alcoholic tremor, for whereas Fürbringer found marked tremor in only 7 per cent. of drinkers, he found Quinquaud's sign present in nearly 92 per cent. The pathology of the condition that produces this creaking is very obscure, and after discussing it Fürbringer concludes that it must be a neurosis, but this result is arrived at more by excluding organic causes than by any positive evidence of nervous derangement. The sign is not likely to be of much practical value, but it is certainly an interesting clinical phenomenon.—*Medical Press and Circular.*

Eczema.

The following method of treating this condition is given by Lassar, in the *Dermat. Ztschr.:*

It is necessary to inquire very carefully to discover the cause of the cutaneous inflammation. Very frequently the cause is found to be some external irritant rather than some perversion in the constitution or the blood. If the dermatitis is recent, induced by some external irritant, it is necessary to purify the surface, which may be done as follows: A warm bath with the addition of bran and a bland, never a medicated, soap, or by fomenting with an infusion of camomile flowers. Then the affected parts are to be enveloped for half an hour, three times a day, in compresses moistened with a 1 to 1,000 watery solution of zinc sulphate. The compresses are to be replaced by fresh ones as soon as they become warm. This alternation of evaporating fomentation and cooling contraction imitates the natural activity of the absorbing capillaries, and is grateful to the patient. Directly on the moist follows the dry treatment, which consists of the free application of a simple dusting powder, the cheapest and most serviceable being a fine pure talc. If itching is prominent a 1 to 2 per cent. solution of carbolic acid may be added. If burning is present it is well to add from ½ to 1 per cent. of menthol. By the establishment of a protective layer, frequently renewed and kept in position by bandages, the damaged epidermis is replaced by a regenerated epidermis. This method of procedure in time renders the skin dry and its smoothness can be restored if a paste composed of zinc oxid 60 parts, olive oil 40 parts, be thickly smeared on, dusted over with talc, covered with cottonwool and a light bandage applied. In the

morning the part is best cleansed by olive oil to avoid fresh irritation, If pustules form each one should be opened with an aseptic knife, compresses moistened with aluminum acetate are to be applied and later a vaselin starch paste:

℞ Zinci oxidi,
Amyli .....āā ℥ii 8
Vaselini .....ℨss 15
M. Sig. Apply as directed.

Acidi salicylici gr. x-xx (.6-1.2) may be added if itching is intense. In the parasitic forms, if superficial, this same paste with the addition of from 10 to 20 per cent. of sulphur is efficient. When deeper infiltrations are present a success is hardly possible without tar. The crusted eczema of the face in children can be rapidly cured if managed as follows: It must be carefully cleansed, oiled over, then washed without so much friction as to cause bleeding; then thickly smeared with a salve of

℞ Olei rusci,
Sulphuris sublimati .....āā ℨss 15
Vaselini,
Saponis domestici .....āā ℨi 30
Cretæ albæ.....℥iiss 10
M. Sig. Apply locally, cover with powder and bandage.
—*Jour. A. M. A.*

Tuberculous Cystitis.

Hartmann advises the injection into the empty bladder of from three to eight drachms, depending on the tolerance of the bladder, of a mixture of iodoform, one part; sterile liquid vaseline, twenty parts. The patient is instructed to stop the flow of urine when the oil appears. This controls the pain in the bladder. Some patients are able to retain the vaseline for from three to six days. When the pain reappears instillations of from twenty to thirty drops of a mixture of iodoform, 1 part; liquid guaiacol, 5 parts; and sterile vaseline, 100 parts, are given once or twice daily. Capsules containing 0.15 grain of iodoform and 0.75 minim of creosote are now administered. Such surgical procedures as excision of tuberculous ulcers of the bladder, or nephrectomy for unilateral tuberculous kidney should be performed when indicated.—*Clinical Review.*

Miscellaneous.

HYDROGEN PEROXIDE.

HOW BREAKAGE OF BOTTLES CAN BE REDUCED TO A MINIMUM.

(Abstract from the *National Druggist*, of St. Louis, Mo., October, 1904.)

The greatest obstacle that lies in the way of producing a sound container for liquids occluding gases under high pressure, as, for instance, solutions of hydrogen peroxide, is the fact that no process for making unbreakable glass has yet been discovered.

Up to the present, the ordinary amber glass bottles have been found totally inadequate and untrustworthy, though a device patented by Mr. Charles Marchand goes far towards overcoming this delinquency.

This device practically reduces the danger of bursting of the bottles to a minimum. As long as the bottles having this device are kept in stock standing up, the pressure resulting from shaking, high temperature in course of transit, etc., will not rise much above four or five pounds to the square inch; and, therefore, though occasionally a bottle may crack or burst, it is not due to pressure, but to the inherent imperfection of the glass, arising either from the lack of homogeneity, or else imperfect annealing, or both, to which we have already referred.

The worst feature of this unreliability in the bottle is, that there is no accurate way of detecting it. A bottle may be submitted to a pressure of a hundred pounds to the square inch, without betraying signs of weakness, yet even with nothing in it, it may burst or crack within an hour.

The only remedy in these conditions as to the bottles, and that is not absolute, is in changing the material from which the containers are made, and substituting, for the unreliable amber glass, a good article of flint glass. While, as we have intimated, this does not absolutely remove the danger of loss by explosion or cracking, it greatly reduces it, and when the flint glass container is closed by Marchand's Safety Valve Stopper, danger is reduced to a minimum, beyond which, in the present condition of the technics of bottle making, it is impossible to go.

This is exactly what Mr. Charles Marchand, the manufacturer of hydrozone, glycozone, peroxide of hydrogen, etc., intends to do. Just as soon as his present stock of amber glass containers is exhausted, he will use exclusively flint glass,

every bottle being corked with an automatic safety valve stopper. By adopting these expedients, Mr. Marchand, having done all in his power to prevent breakage, can go only one step further—to make good any losses from that direction—replace the bottles that get broken from this cause. Beyond this it would be unreasonable to expect him to assume further responsibility. The actual danger to life or limb from the bursting of a bottle of hydrogen peroxide, or any of Mr. Marchand's preparations, is trivial, as compared with those arising from the explosion of bottles of beer, ginger ale, champagnes and other sparkling wines, or heavily aerated waters.

When any of these rupture, the fragments are driven, not only with all the force and energy of the already liberated gases, but with the augmented energy of the residual gas suddenly set free, and so may inflict severe, sometimes irreparable damage. The safety-valve arrangement in the stopper of bottles of hydrozone prevents the sudden disengagement of a great volume of gas.

Assuming that through some imperfection of the stopper the puncture should close as soon as the pressure from within rose to a point far within that required for the rupture of the bottle, the stopper, not being wired but merely tied down, will be forced out.

But glass is a proverbially brittle and treacherous substance, and it is liable to break in the hands of anybody, at any moment, and without any discoverable or apparent cause, and that whether filled or not. As a consequence there must always be some risk attached to the handling of glass containers. The best that can be done as we have suggested elsewhere, is to reduce the risk of rupture or fracture to a minimum, and this Mr. Marchand has done, not only by his safety stopper device, but also by the promised substitution of the stronger flint glass. The retail trade will, we are sure, welcome this latter change most heartily, since it completes and supplements the efforts made in the mechanical direction, and thus removes, as far as lies in human efforts, all danger arising from handling Marchand's goods.

We direct the attention of our readers to the medical practices for sale among our advertising pages, offered by Dr. W. E. Hamill, medical broker, who conducts the Canadian Medical Exchange. Physicians desiring to either sell or buy a medical practice cannot do better than take advantage of the doctor's ripe experience and rich equipment either to secure or dispose of a medical practice. His system certainly offers to the profession a short-cut to the end desired.

An Old Remedy Combined with a Newer One.

The *Massachusetts Medical Journal* recently published the following, which will no doubt be interesting to our readers:

"We believe that members of the medical profession should familiarize themselves with the combination tablet of antikamnia and heroin. The first of these, antikamnia, years ago established a prominent place for itself as a most reliable antipyretic, antineuralgic, and general pain reliever, while heroin is, by all odds, the most efficient of recent additions to our list of remedies. The advantages of this combination are fully illustrated by a report of cases submitted to us by Dr. S. Boone, Professor of Surgery and Pharmacology, College of Physicians and Surgeons, St. Louis. We reprint three of said cases, as each has some particular features which successfully called into use in a most beneficial manner the synergetic action of these two drugs:

"CASE 1.—J. P., athlete. Suffering from an acute cold. On examination found temperature 101° with a cough and bronchial rales. Patient complained of pain induced by constant coughing. Prescribed antikamnia and heroin tablets, one every four hours. After taking six tablets, the cough was entirely relieved. Patient continued taking one tablet three times daily for three days, when he ceased taking them, and there has been no return of the cough or pain.

"CASE 2.—Ed. H., aged 30. Family history—hereditary consumption. Hemorrhage from lungs eighteen months ago. His physician had me examine sputum; found tubercle bacilli. After prescribing various remedies with very little improvement, I placed him on antikamnia and heroin tablets, prescribing one tablet three times a day and one on retiring. He has since thanked me for saving him many sleepless nights, and while I am aware he never can be cured, relief has been to him a great pleasure and one which he has not been able to get heretofore.

"CASE 3.—Wm S., aged 28. Lost twenty pounds in last thirty days. Consulted me July 9th. I thought he most certainly would fall victim to tuberculosis. Evening temperature 101° with night-sweats and a very troublesome cough with lancinating pains. Prescribed 1-100 gr. atropine to relieve the excessive night-sweats and one antikamnia and heroin tablet every four hours, with the result that he has entirely recovered and is now at work as usual.

"Neither in these, nor in any other of my cases, were any untoward after-effects evidenced, thus showing a new and distinctive synergetic action and one which cannot help being beneficial."

The Canadian Practitioner and Review.

VOL. XXX. TORONTO, FEBRUARY, 1905. NO. 2.

Original Communications.

CLINICAL EXPERIENCE WITH OCCIPITO-POSTERIOR LABORS.*

By KENNEDY C. McILWRAITH, M.B. (Tor.), F.O.S. (Edin.),
Associate in Obstetrics, University of Toronto.

Mr. President and Gentlemen,—I wish to bring to your notice this evening the history of some occipito-posterior labors. I shall refer first to a labor which I conducted on September 25th, 1900. The whole duration of this labor was ten hours. The pains were strong and progress reasonably rapid. The position was O.D.P. When the head reached the perineum I gave a little chloroform, and the child was born face to pubis without difficulty and without laceration of the perineum.

Again, on the 9th of August, 1902, I confined a woman whose labor began with rupture of the membranes, advanced rapidly, and was over in five hours, the occiput rotating to the front without assistance. One sees, then, that there are some cases of occipito-posterior position which do not call for interference, and the difficulty lies in recognizing these early. My practice is, as long as the labor pains are of normal character, progress rapid and pelvis roomy, let it alone.

In August, 1899, I confined a young woman who had been about twenty-four hours in labor. The head was pretty low down and I put on the forceps and delivered, after a hard pull. Result: a dead baby, a severe laceration and a protracted convalescence. Not long afterwards I gave an anesthetic for a fellow practitioner in a similar condition. The result was the same. These two cases may serve to illustrate how this

*Read at the January meeting of the Toronto Clinical Society.

method—the one advocated by Robert Barnes and followed at the Rotunda—will often fail. I would add that if this method is followed, ordinary forceps with a shallow pelvic curve or with no pelvic curve at all, are better than axis-traction forceps; for with the latter the head is apt to rotate forceps and all, and then the sharp pelvic curve becomes a disadvantage. Again the straight forceps gives a better grasp of the head when the occiput is posterior.

On August 2nd, 1904, I was asked to see a woman in consultation, who had been a long time in labor. The position was L.O.P. and had not been recognized. The vagina was dry and its tissues swollen. Forceps were applied with difficulty by one of the physicians in attendance, who exerted almost his utmost strength for about fifteen minutes, without advancing the head at all. I then introduced my right hand, freed the head from the brim by pushing it up, grasped the anterior shoulder within the uterus and rotated the back and then the occiput to the front. Keeping my fingers at the side of the head to maintain the position I slipped one blade of the forceps along the hand. The second blade was easily applied and delivery quite easy. There was a complete laceration.

On May 16th, 1904, I was asked to assist a physician at a case of delayed labor. He applied axis-traction forceps and made strong traction without advancing the head. I then made an examination and found the occiput to the left rear. I corrected this as in the previous case and delivered easily.

On September 30th, 1904, I saw another woman who had been in pretty severe labor for fifty-six hours. The uterus was so tightly contracted about the body of the child as to show its outline through the abdominal wall. Rotation in this case was difficult and extraction easy. There was an offensive odor to the discharge at the time of labor, and gonococci were found in it. Ten days later this woman died of septicemia.

In another which I saw on November 16th, 1904, the forceps had slipped several times and there was considerable laceration. The skull of the infant was fractured and there was large effusion of blood beneath the scalp, simulating hydrocephalus. Delivery was easy in this case also after rotation.

I could multiply instances, but it is not necessary, and I shall content myself with giving the history of one case in which I practiced early interference, manual rotation and extraction with forceps.

I diagnosed the position O.D.P. by abdominal palpation a week before labor set in. Labor began with the escape of the waters, and the pains rapidly became very severe and the intervals short. At the end of five hours the os was less than a shilling in size, but the cervix was taken up. I dilated under

full anesthesia, rotated the shoulders by one hand in the uterus and delivered without laceration at all.

The difficulties which arise in connection with this condition are:

1. *Diagnosis.*—This should be made early in labor by means of abdominal palpation. When the back is to the right, one always suspects that the occiput may be posterior. When the fetal heart can be heard at all, its point of maximum intensity is usually far out in the flank. When the head, however, gets low down in the pelvis, the fetal heart sounds are usually heard most distinctly over *chest* of the child, *e.g.*, in R.O.P. the heart sounds are heard best to the *left* of the middle line of the abdomen, and above the middle line of Poupart's ligament. In making a vaginal examination do not trust to the sutures. They are often obscured by a large caput. Feel for an ear, and its lobe will give the direction of the occiput. The anterior ear is often more easily reached than the posterior.

2. *Dry labor*, whether from oligohydramnios or from early rupture of the membranes, is a very frequent accompaniment of these labors, as was pointed out two years ago by Prof. Adam Wright. This complication generally prolongs labor and increases the danger of laceration and septicemia, besides rendering rotation more difficult.

3. *Rotation by hand.*—The development of this manœuvre has been by three stages. First, the finger alone was introduced into the vagina and the occiput rotated to the front by pressure with the finger up behind the posterior ear. I am convinced that this could only be successful in cases which would soon have righted themselves unaided. Emboldened by the success of antiseptic precautions, the next generation passed its whole hand into the vagina, grasped the head and rotated it, rotating the shoulders by a hand on the abdomen. I have found this method uncertain because you cannot be sure of rotating the shoulders in this way; also the firm grasp of the head necessary depresses the bones of the skull.

Lastly, there is this method of rotating by grasping the shoulder within the uterus and rotating the body. The head is then easily turned as the hand is withdrawn. This method I have found uniformly satisfactory. In R.O.P. the right hand pushes the posterior shoulder outwards and backwards; in L.O.P. the right hand pushes the anterior shoulder inwards and to the front. I always use the right hand because it is the one which is to guide the first blade of the forceps. If you use the left hand and then withdraw it to insert the left blade, the head rotates back.

4. *Pressure on head* by forceps is directly proportionate to the amount of force necessary to deliver. One of the com-

monest causes rendering force necessary is insufficient dilatation of the os; therefore, when you dilate, be sure to dilate thoroughly.

5. *Maintain flexion* while rotating.

In conclusion, let me point out the advantage of early interference, manual rotation by the shoulder and forceps delivery. The cases I have cited illustrate the danger of letting things go on, or of trying to deliver without altering the position. By this method we avoid these dangers; labor is greatly shortened, and pain prevented. Lacerations are less likely to occur, and when they do occur, heal more readily because the tissues are not injured by long-continued pressure.

TREATMENT OF CONSUMPTIVES AT HOME—ADVANCED CASES IN PRACTICE.

By EDWARD PLAYTER, M.D., Toronto.

The professional pendulum is now swinging back to rational medicine in the treatment of consumption. Hence we have articles, pamphlets and even books, on the "Home Treatment."

Some of the best authorities now contend that the "Open Air at Home" treatment for a considerable proportion of cases, of the more intelligent patients, who will carry out implicitly and persistently their physician's instructions, and this in the fullest detail, will get on better, often much better, at home than in a sanatorium with a herd of sick strangers.

On sanatorium treatment, in the *British Medical Journal* a few months ago (February 27th, 1904), Doctor Edward Dean Marriot, writes: "The aggregating of the infective sick in permanent hospitals has been shown to be as useless as a preventative measure as it is injurious to the individual segregated. It is no wonder, therefore, that the experience of the system of 'curing' consumptives in smitten herds has led to a reaction. It is a curious commentary on the manner in which the popular imagination has been inflamed by the booming of German statistics that the system is now deprecated in that country. In France it is ridiculed. In this country (England), adverse commentary must be made with bated breath. The Austrian Tuberculosis Commission recently declared that persons in whom the disease had been dormant and whose prospects of prolonged life were good, died with startling rapidity after entering Sanatoria. No fact is better established than that the mortality from consumption in England was reduced fifty per cent.,

by general sanitary improvements, in the three or four decades just previous to the Sanatorium craze."

Some advanced cases, with great emaciation and prostration, having come under my care and eventually recovered, being now, years after, practically as well as ever, I feel constrained, in the interests of the profession and the public, to draw attention to two of them, as an example of what we can sometimes accomplish, and to preface the notes of the cases with some remarks on treatment in general.

Being firmly convinced that the immediate cause of tuberculosis is an auto-intoxication, in a pre-tubercular stage, from deficiency or want of oxygen in the system, produced by imperfect, shallow breathing, commonly of already over-breathed air from imperfect ventilation of rooms or other apartments, I am as firmly convinced that there is no other specific for the morbid condition than abundance of "outdoor" oxygen—pure, crisp, zero oxygen (the colder the air, the more oxygen, bulk for bulk, and the greater its expansion in the more or less collapsed pulmonary air cells).

Remarkable it is that there is such a vast difference in the range of expansion in the lungs of the average of so-termed "healthy" persons. I had occasion to examine the chests of nearly one hundred students attending the Ottawa College. In some young men with large chests the range from forced expiration to forced inspiration was less than two inches, while in others, with much smaller chests, the range was over four inches.

Oxygen, then, is the only specific—*the* only anti-intoxicant—with sufficient suitable nutritious food, to build up and revitalize the blood and with it the entire organism.

Except in the very earliest, the pre-bacillary, stage, when the patient is still able to be active out doors, ordinary respiration is not sufficient to successfully combat the disease. The patient must be taught to breathe deeply, get in more oxygen, and increase the respiratory capacity. Statistics show that all consumptives, in the earliest stage, have proportionately a small respiratory capacity.

Never in one instance have I found lung gymnastics, for increasing respiratory capacity, increase the tendency to hemorrhages. Of course great caution is necessary at first. And by this means the capacity can be much more safely increased than by ascending elevated mountains. On the contrary, the pure air tones up the lung tissues and tends to the prevention of hemorrhages, and the denser air more than that which is rarified.

To increase the supply of oxygen in the blood, then, is of the first importance, and absolutely essential to recovery, as I need

hardly write. But it is not enough, especially when any part of the lung has lost its respiratory condition, to simply require the patient to live an out-door life, and continue to breathe as in the past. More than ordinary respiration must be enjoined and persisted in. The respiration in the past has not been sufficient, or there would not be a tuberculous condition, nor a pre-tuberculous one; hence, an increase is absolutely essential, or there can be no, or but little, continuous or permanent improvement. It may be that, to the weakened tissue of the air-cell walls from the shallow breathing of an inactive, perhaps indoor life, is added an immediate or exciting cause, such as a "cold" or measles, added to the already weakened tissue and the auto-intoxication. All the same, and the more essential, free laving and exercise of the tissue of the air cells with pure air, by deep breathing for many months, indeed ever after, for toning up the tissue and getting into the blood abundance of the antitoxine—oxygen is absolutely indispensable to recovery.

It must ever be remembered, however, that the greatest caution is demanded in the practice of such gymnastic exercises, especially in the beginning, with only slow movements of the arms. With such caution there is no, or the minimum of, danger. And in any case, in it is the patient's only chance.

The nutrition of the patient, the diet, is of the next importance. A consumptive should not have a mouthful more food than can be digested, and, *assimilated*—made blood of. Hence, this part of the treatment requires care and study to find out just what, and how much, each individual patient can so utilize.

Stuffing, as we know, has been found to be a serious mistake, and has had its day. Any excess of what is assimilated will but increase the auto-intoxication, tend to diarrhea and emesis. With excess, some patients may fatten, fatten as bovines do, but with a steady increase of tubercular deposit. It is better, firmer, muscle and nerve tissue that is needed, not burdensome fat. And the strength may increase, indeed commonly does, without appreciable increase in weight. Not very long ago, this so, thought "good indication" of "fattening" was rationally discussed in the *British Medical Journal.*

In nearly all advanced cases, however, something more than the ordinary food—beef, eggs, milk, etc., is required. I have found the greatest benefit from "Sanguis Boum," a preparation consisting chiefly of ox blood and Malaga wine. It is highly nutritious, the patients like it, and it is the least expensive of the nutriment medicines; and hence can be prescribed and taken in liberal quantities.

The amount of exercise permissible demands a good deal of consideration. When the pulse rate is persistently over one

hundred, very little should be allowed. The patient should. then, lie or sit in the open air and sunshine, and keep up the deep breathing, as constantly as possible.

The skin, ever in deep sympathy with the mucous membrane of the lungs, and as, in a measure, a respiratory organ, demands attention. When, as often is needed in advanced cases, nightly inunctions, as of cod-liver oil, with, perhaps, creosote, for purposes of nutrition and anti-intoxication, are employed, then a morning wash is most essential, followed by a cool, tonic "rub down."

My special medicaments are few in number. Inunctions of the sulphus or iodous combinations or compounds, especially over the diseased lung, well rubbed in, I think useful, often. Direct injections of such, or of the various oils, diluted, into the lungs, per larynx and trachea, I have practiced with, considerably, in very far advanced cases, with apparently decided benefit. And I have found so simple a remedy as a drop or two of oil Sylvestris on a grain of sugar, taken just before a meal, prevent the necessity of leaving the table for a paroxysm of coughing, and perhaps emesis.

But the cough can only be safely, and it always can be allayed, and also night-sweats and fever abated and eventually overcome, by pure, cool or cold fresh air, night and day, out doors and in. For allaying temporarily an irritating cough, I commonly use a soothing inhalent—menthol, camphor, dissolved in ol. eucalyptus or other of the more soothing essential oils. If the expectoration be tenacious, a little ammonia or potash may be added; if copious, an astringent inhalent. I use only the simple, old style inhaler: an open-mouthed bottle with two glass tubes, one for the admission of air, the other with a small mouthpiece to hold between the lips when inhaling.

And diarrhea and emesis can only be effectually prevented by a judicious, well adapted diet.

With these details little need be said on the special "Cases in Practice."

One of the worst cases, perhaps the worst, the farthest "gone," apparently most hopeless, I have had, was that of one Grace E. M—. The facts concerning this case, nearly all came out under oath in the County Court of York, a year ago last November, and are hence public property. They were largely published in the *Evening Telegram* and other papers. Miss M—. of Gladstone, near London, became tuberculous after measles; was treated many months by physicians near home and in London, with, nevertheless, gradual failure in health. She then tried to get into the Sanitarium at Gravenhurst; but being so "far gone," as she stated, the medical examiner in Toronto would not "pass" her for admission there; but advised

her to go to that village and receive treatment at the Sanitarium, which she did. Some weeks after, the medical superintendent of that institution, Miss M— stated, wrote to her father that "he had better take her home as nothing more could be done for her" improvement. A clerk in the Dominion Bank in Toronto, holidaying in Muskoka, became interested in her, sent her one of my books on consumption, and induced her to consult me, in October, 1898. On reaching my rooms, on Carlton Street, in a coupé from the station, she was much exhausted and short of breath. I found great emaciation and prostration; the entire left lung a mass of breaking down tubercular matter, with two cavities of medium size. The right lung was in a very fair condition, with only a few rales in the upper lobe. I could not, then, give her any hope of recovery; privately, to her friend, quite the reverse. I suggested, however, that if she chose to remain a few days in Toronto, I would again examine her and give her a more definite, decided opinion. Good quarters were at once secured for her on Wilton Crescent. After a rest of two days, I informed her that if she would carry out strictly my instructions,—be a "good patient," there was a possible chance for improvement. She was unusually anxious to get well, the faint hope dispelled some of her despair, and of course she promised to do everything I would tell her to do. And I never attended a "better" patient.

She was twenty-one years of age, small of stature, and the only child of healthy, well-to-do parentage.

Her room was small, but a sliding damper was made in a stovepipe which passed through it, to carry off breathed air, and the window was kept more or less open, night and day, with bed between the damper and window.

It should be stated at this point, that I have been in the habit of placing patients, when I could, in a three-windowed "bay" (we had five of these in the Moore Park house), the bed-head pushed into the "bay," as far as it would go, with every window open, sometimes wide, sometimes but very little, even in windy weather, night and day, in every month in the year. And never, in a single instance, with anything but benefit: the patient, I need hardly add, well wrapped and warm.

Miss M —— was well rubbed all over, from shoulders to calves, for an hour every night before going to sleep, with a mixture of cod-liver oil and creosote, by her good landlady, for many months; well washed with tepid water and soap in the morning; and then the left side of the chest, from sternum to spine, well rubbed with strong iodine ointment. She had long been obliged to frequently leave the table soon after commencing a meal, and suffer from a paroxysm of coughing, and not infrequently to vomit the little she had eaten. After trying

several remedies in vain, the trouble soon yielded entirely to two drops of oil Sylvestris just before each meal.

During the severely cold weather, objections were made to having the window much open, on account of cooling other parts of the house. I had then made for her two very light valves in a mouth and nose piece such as dentists sometimes use, one valve opening inwardly, in inspiration. To this was attached one end of an air-tight, ½-inch tube of block tin, with a piece of the best rubber tubing; the other end passing out under the window sash to the outer cold air. With this she would lie for hours and breathe the outer air through the tube, and sometimes sleep so breathing; expiring into the room through the other valve, which opened outwardly. She practiced the lung gymnastics well; the breathing and chest expansion improved; the stomach, unburdened and undisturbed by anything but plain food, including Sanguis Boum—no oil, no creosote, digestion and strength improved also, and in a few weeks she was able to walk up to the Gardens, where on fine days she would sit for hours, well wrapped.

Cough and expectoration became gradually less, the lungs cleared up, cavities healed, with some flattening of the chest, and the natural respiratory murmur gradually took the place of the universal rales. In the next following August, she went home a comparatively well woman. Since that time she has spent two winter sessions at a Washington, D.C., school of drama, studying for the stage; and in Toronto, at the court, above mentioned, four years later, was as well, practically, and vigorous, as she ever was.

Wm. H. H——, of Toronto, had been a clerk in the Ottawa Bank here for several years. Owing to profuse pulmonary hemorrhages, with usual symptoms of progressive tuberculosis, he was obliged to give up his position. He went to Muskoka, and was treated by several physicians, for months, with no improvement, but on the contrary, gradual progress of the disease. He came under my care in the autumn of 1902. No natural respiratory murmur could then be heard in the left lung, but universal rales, with marked dullness; the right was practically free from tubercular deposit, though the cog-wheel respiration was manifest. He was considerably emaciated, but could walk from his home in the west end of the city, down grade, to the centre, taking a car for returning; respirations, thirty per minute, without very marked shortness of breath or labored breathing; pulse persistently over one hundred; with a good deal of cough and expectoration. The hemorrhages had continued at intervals and were at times very profuse. Appetite and digestion fair. He had taken habitually considerable out-door exercise, in the form of quietly walking.

He was treated in accordance with the principles set forth above, residing at home with his father. The exercise was restricted, and he sat or lay constantly out of doors or at largely open windows; chest and lung expansion, commenced with the utmost care, with slow action of the arms, but persistent; strong iodine ointment freely rubbed in with much friction, over the diseased side every night: inhalations, chiefly of menthol, with the simple inhaler; half grain opium pills, one or two every hour, were prescribed, with absolute rest, on indications of hemorrhage; liberal diet, with thorough mastication; Sanguis Boum; and the morning bath. This course was steadily persisted in, with gradual improvement; the opium pills were but rarely needed, the bleedings becoming less frequent and less copious. The cough remained the most persistent symptom.

Last spring he articled under surveyors, and has been doing his share of the out-door work on surveys, practically well, ever since. The lung tissue has not yet entirely recovered its tone, respiratory murmur being somewhat weak, but will doubtless soon be restored to about its natural condition.

Selected Articles.

THE CIRCUMSTANCES AND TREATMENT OF MOVABLE KIDNEY.

By SIR FREDERICK TREVES, Bart., K.C.V.O., C.B., LL.D.,
Sergeant Surgeon to H.M. the King.

Conspicuous among the maladies of modern times is the curious condition known as movable kidney. The early pathologists were aware of the various congenital anomalies of position to which the kidney is liable, but the movable kidney appears to have escaped their notice.

It does indeed still escape notice on the post-mortem table, its undue mobility practically ceasing with the patient's life. At the autopsy the organ is found in place, and there may be nothing to suggest that it had ever left its normal position. Moreover, it is not always possible to determine after death if a kidney had been clinically movable during life, except perhaps in cases in which the mobility has been extreme.

Ebstein* mentions that in 3,658 autopsies performed in the Charité at Berlin a movable kidney was found in 5 instances only, showing the proportion of the affection to be apparently 1 in 732.

On the other hand, Glénard asserts that among females no less than 22 per cent. of all adults have movable kidneys.

The discrepancy between these two quite precise statements is not a little astonishing, and serves to illustrate the differing views in which the movable kidney presents itself to the notice of the maker of post-mortems on the one hand, and the clinical diagnostician on the other.

While the silence of earlier writers on morbid anatomy is intelligible, and the results of modern pathological records are to be explained, it is difficult to understand how the movable kidney came to elude so long the notice of the clinical observer.

The displaced or displaceable organ is as a rule singularly easy to detect, and indeed is apt to thrust itself incontinently into notice. It has been more than once discovered by the introspective patient, who has been much terrified by the apparition and by the diablerie of its movements.

Yet in spite of this it seems to have escaped the cunning and watchful fingers of the man of medicine until quite recent times.

It could hardly have been included with the phantom tumors of bygone days, for the accounts of the phantom,

* Ziemssen's *Cyclopedia of Medicine*. London. 1877.

though always vague, leave little doubt but that it owed its being most usually to a contracted section of the rectus muscle or to a laboring intestine distended with gas or feces.

It is strange that to Dr. Bright, the shrewd physician, there should not have appeared this common phenomenon, for he makes no mention of it in his very exhaustive and elaborate "Clinical Memoirs on Abdominal Tumors."

The majority of the cases upon which Bright based his memoirs fall between the years 1828 and 1839.

The first sound clinical description of movable kidney appears to have been given by Pierre Rayer, whose work (*Traité des Maladies des Reins*) was published in Paris in 1839.

It can scarcely be assumed that the movable kidney is to be ranked among the many inventions of the ever-active 19th century, or that it is one of the teeming products of the productive Victorian era.

The condition has been referred to by some modern writers as a stigma of degeneration, but such stigmata are not of abrupt appearance, and yet previous to the commencement of the last century no detailed mention of the movable kidney is, I believe, to be found.

Ebstein, who appears to have dipped into the history of the matter, states that "observations" on movable kidney were made by Mesua and Johannes Riolan, two writers who flourished in the 16th century, but he ascribes the real clinical appreciation of the condition to Pierre Rayer. Some account of the movable kidney as it is at present regarded may now be given.

The Anatomy of Movable Kidney.—The kidneys are deeply placed at the back of the abdominal cavity. If the body were transparent it would be seen that these organs are to a great extent covered in front of the cartilages of the seventh, eighth, ninth and tenth ribs, that the upper end of the left kidney reaches to the height of the ensiform cartilage, and the right nearly to that level. According to Quain the left kidney is $1\frac{1}{2}$ inches, and the right 1 inch, above the position of the umbilicus, or the summit of the iliac crest. The organ on the left side is frequently altogether above the infracostal plane. The upper end of the kidney lies upon the diaphragm.

The organs are somewhat lower in women and in children than in the adult male. In childhood the kidneys are relatively larger than in the adult, and before the tenth year are surrounded by very little fat.

The kidneys lie in recesses on either side of the spinal column, and are invested by that extension of the subperitoneal tissue which is known as the perirenal fascia. The organs themselves are immediately surrounded by a considerable quantity of fat, in which, indeed, they are buried.

The kidneys are maintained in position by the fascia and fat which surround them, by the general pressure of the abdominal viscera—the important intra-abdominal pressure—and to a minor degree by the vessels which are proper to the organ. Much support is also derived from the configuration of the lumbar recesses in which they are lodged.

The peritoneum, which passes over the ventral surface of the kidney, has little effect in holding the gland in place. The serous membrane is itself readily rendered mobile, and it has but an indifferent hold upon the fascia and fat in which the kidney is lodged.

There are in this fascia certain strands of condensed tissue which pass from the structures forming the posterior abdominal wall to the fibrous capsule of the kidney. These appear to me to take a prominent part in the fixation of the organ. They vary in consistence, are often tough, and are then encountered by the finger in clearing the kidney from the surrounding tissues in the operation of nephrectomy. It may be said, however, that Wolkow and Delitzin are of opinion that these bands have little or no effect in supporting the organ.

The normal kidney moves on respiration. This is a point insisted upon by most writers. Those who are specially impressed by the mobility of the gland allude to the passage of the kidney up and down when exposed through an incision in the loin. Kidneys so exposed are—it is to be hoped—seldom normal, and the posture of the patient during operation as well as the respiration under anesthesia is also not normal. Dentu states that the range of the up-and-down movement of the normal kidney during natural breathing is from 3 to 5 cm.

This I cannot think is accurate. It many times falls to the lot of the surgeon to have to examine the kidneys during an abdominal operation, and many times the organs so palpated are normal. The occasion is not suited for the making of physiological observations, but the impression such examinations have left on my mind is this—that the movement of the left kidney on inspiration is often not to be appreciated, while that of the right is slight and always much less than is the respiratory movement of the liver. A range of movement of 3 to 5 cm. I have never witnessed in normal organs.

Etiology of Movable Kidney.—The etiology of movable kidney is obscure, and little is known of the precise tissue-changes which lead to the prolapse of the organ This can be said, that it is infinitely more common in women than in men, that it is more frequently met with on the right side, and that most of the cases fall between the ages of 25 and 50, or are at least first discovered between those periods.

Glénard states that out of 148 cases which came under his

notice, 131 were in females and 17 in males. In 126 instances the lesion was on the right side, in 3 only was it on the left, while in 19 examples both kidneys were movable.

Legry states that 87 per cent. of the cases are in women and Dentu considers that from 85 to 90 per cent. of the instances are on the right side. One writer is so far impressed with the frequency of movable kidney in women as to assert that 22 per cent. of all adult females present this condition.

There is no doubt but that a movable kidney is quite uncommon among men. I have never been called upon to seriously treat this condition in a man, and while operations upon movable kidney are only too common, such records as I have encountered are almost silent as to operations upon men.

A displaceable kidney on the right side in a male subject is now and then met with, but such a condition on the left side is, in my experience, exceedingly rare. The diagnosis of a left movable kidney in a man is not so uncommon, but the tumor has not always realized the diagnosis and has usually proved to be some such thing as a fecal mass in the colon or a sarcoma of the omentum.

A large proportion of the women who are the subjects of movable kidney are individuals of feeble muscular development, of lax tissues, with flabby abdominal walls, and with possibly a tendency to general enteroptosis; on the other hand, a movable kidney is by no means to be discovered in all cases of pendulous abdomen.

The trouble is more common in those who have had many children than in those who are childless, and quite a striking proportion of the subjects have become more or less rapidly thin. There is no doubt but that the rapid loss of intra-abdominal fat is a common and immediate cause of loose kidney. Sometimes the diminution in weight has come without apparent reason, while in other instances it has followed upon some exhausting illness.

The mere loss of the perirenal fat will not, however, produce a movable kidney. This state of the organ is by no means of necessity a feature of emaciation. On the other hand, a movable kidney may be met with—although rarely—in the corpulent, and every surgeon will testify that the wandering organ when exposed by operation is not always found to be deprived of its fatty envelope. Now and then the investment of fat has appeared to me to be normal, although there can be no doubt but that in the majority of the examples of movable kidney the amount of the perirenal fat is diminished.

There is evidence to support the view that undue mobility of the kidney may be produced by injury. Such a sequence of

events is uncommon, but I have met with instances that I think are beyond question.

Long-continued horse exercise, and especially hunting, have been accredited with the production of movable kidney, but here it would seem probable that the jolting has drawn attention to the condition rather than produced it.

Examples of movable kidney have been met with in quite young women and even in children, and there is much probability that certain cases are congenital. In this connection it may be said that the meso-nephron would appear to be a pure myth. It has been described, and the description has been faithfully repeated. The structure does not, however, seem to have been seen by the human eye, and indeed the meso-nephron has for long occupied the position of an anatomical Mrs. Harris.

There is no evidence that tight-lacing plays any part in the production of the condition now under notice. Although the deformity effected by tight-lacing is no longer popular, yet writers still claim for the practice the merit of original sin, and ascribe to it many disorders which are of obscure etiology.

The Examination of a Movable Kidney.—A normal kidney cannot be discovered by palpation in the living subject. The only exception to this statement may be provided by the subjects of extreme emaciation and by thin children, especially when they are examined in the erect position.

In searching for a movable kidney the patient lies upon the back, the surgeon sits upon one side of the couch facing the patient. It may be assumed that the examination is being made upon the right side. In such case the surgeon's left hand supports the loin from behind, the fingers occupying the space between the last ribs and the iliac crest. The palm of the right hand is placed firmly upon the anterior abdominal wall just below the ribs. The fingers point upwards and outwards. Associated with these fingers of the right hand is the left thumb. The patient is made to take a deep inspiration, and the kidney, if movable, is felt to descend between the left fingers spread out behind and the left thumb and right hand on guard in front. A little pressure between the hands and the organ is held, while a little more pressure during expiration and it will slip away again under the ribs.

Glénard describes the steps of the examination under three graphic headings; the lying in wait, the capture, the escape.

This examination must be supplemented by an investigation of the renal area when the patient lies upon the sound side. In this attitude, if the shoulders be well raised and a deep inspiration be taken, the kidney may be felt to have tumbled towards the median line or to move on respiration between the two watching hands. An exceptionally movable kidney may

be entirely overlooked if it happen to be absent from the renal region when that district is being examined. I remember an instance in which one surgeon said that the kidney was the most movable he had ever encountered, while another surgeon maintained that the organ did not move at all.

A further examination of the district should also be made when the subject is standing erect.

The inferior border of the organ is well defined, but the upper extremity will be masked more or less completely.

Degrees of Movable Kidney.—Glénard bases four degrees of movable kidney upon the results of the method of examination just detailed:

1st degree. The kidney just descends on inspiration. Its lower end can be felt, but not held.

2nd degree. The kidney can be held between the fingers but its upper extremity is not to be defined.

3rd degree. The tissues above the upper end of the kidney can be compressed, and some definition of the upper end be made.

4th degree. The kidney is floating and can be felt during expiration by mere palpation. The "floating kidney" is unaffected by respiration. It is most often found in the region of the navel, or may extend well into the iliac fossa.

From the clinical observation of movable kidneys of different degree it would appear that the organ at first descends vertically, becoming more and more anterior as its attachments are the more loosened. The upper end inclines outwards and the lower end inclines in. Indeed so marked is this rotation that the movable kidney of the fourth degree tends to become almost transverse in position.

It appears to me also that the thick outer border of the gland moves more and more towards the front wall of the abdomen until it becomes nearly anterior. The feature is noticeable when the organ is exposed by operation in the loin. Indeed, when the patient is lying upon the sound side so much may the kidney be rotated on its vertical axis that the operator in opening the lumbar region may come first upon the posterior surface of the organ.

The movable kidney is usually normal. Owing to the thickness and variable rigidity of the anterior abdominal parietes, the movable kidney usually appears to be larger than normal.

As time goes on the floating kidney returns less and less readily to its proper place in the loin. Moreover a displaced kidney may become fixed by adhesions in an abnormal position

The movable kidney may become the seat of hydronephrosis

This is no doubt due to repeated kinking or acute bending or torsion of the ureter, whereby the escape of urine is more or less abruptly hindered. Such occurrences are marked by those acute symptoms which are generally ascribed to "torsion of the kidney" or "strangulation of the kidney."

Hydronephrosis may, however, occur in cases in which there have been no such acute symptoms of twisting or kinking of the ureter. On the other hand, the occurrence of acute attacks, presumably due to the condition just named, is by no means of necessity followed by hydronephrosis In certain cases it would appear that there is an abiding narrowing of the ureter —owing, as some assert, to the fixing of the bent ureter by adhesions—and, as a result, a chronic condition of hydronephrosis.

The fact that a kidney has become movable does not thereby exempt it from such diseases as befall the undisplaced kidney, and the movable gland has been found to be the seat of calculus, of tuberculous disease, and of a malignant growth.

I think that some legitimate doubt may attach to the statement that in examples of movable or floating kidney the pulsations of the renal artery have been felt.

Diagnosis of Movable Kidney.—Without entering into the complex question of differential diagnosis it may be pointed out that the most common conditions which have led to confusion in association with movable kidney are Reidel's lobe, a distended gall-bladder, and a fecal mass in the colon. It is somewhat disconcerting to reflect that all these conditions may coexist with a movable kidney on the right side.

As a matter of experience I may say that when a doubt has existed as to whether a certain swelling is a movable kidney or a distended gall-bladder, it has more often proved to be the latter than the former.

Symptoms of Movable Kidney.—The symptoms ascribed to movable kidney are legion, and include manifestations which vary from mere peevishness of temper to agonizing renal pain. There is no definite relation between the degree of mobility of the gland and the clinical phenomena associated therewith. A patient may have a kidney running wild in the abdomen and be at the same time free of any discomfort or of any trouble that can be called a symptom.

On the other hand, the very first evidence of a movable kidney may be associated with an acute "torsion" attack.

In the clinical history of movable kidney these attacks stand alone. They are usually sudden and intense, and are attended with acute renal pain, vomiting, abdominal tenderness, and a varying degree of collapse. Some are less abrupt, or may even be gradual in their mode of onset and moderate in their mani-

festations. Some are relieved by posture. Some pass off abruptly, and others slowly. A temporary hydronephrosis may attend the attack, or it may not.

Apart from these intense and alarming disturbances the symptoms ascribed by various writers to movable kidney may be said to include all those manifold ills which make up the melancholy history of the "enjoyers of poor health." There is scarcely an "abdominal symptom" which has not been placed to the credit of a floating kidney. Yet all classical symptoms of this disorder may be present, and the kidneys be found to be firmly fixed in position.

As to what constitutes the classical symptoms of this disorder it is probable that they would be tabulated somewhat as follows. A sense of dragging in the abdomen, a dragging from the loin, attended with an undefinable discomfort and feeling of weakness. This discomfort may pass into actual pain, which pain may follow the lines accredited to renal pain, or may radiate down the thighs and legs and across the back. There may be some undue frequency of micturition, but this is uncommon. Added to this would be certain evidences of abdominal disturbance, such as dyspepsia, flatulence, and constipation. The symptoms are increased by movements, and especially by jolting, and the patient is disposed to walk and stand as little as possible. The relief when in the recumbent position is usually complete.

Over and above such manifestations as these come that congeries of troubles which belong to what is known as "neurasthenia." Here we find a mysterious exhaustion, a terrorising palpitation, vertigo, irritability of temper, instability of purpose, neuralgias of more or less intense types, insomnia, and other symptoms, most of which are described in language of great intensity and vividness by the patient.

Not a few of the subjects of this trouble may be described as presenting an assertive peevishness and a whining type of melancholy which their friends describe as "trying." From the very precise account which Dickens has given of the mental attitude of Mrs. Gummings it may be safe to assume that she had a movable kidney.

Among the less common effects of movable kidney may be mentioned, dilatation of the stomach, intestinal obstruction and jaundice. I have reported two cases in which the movable kidney reproduced with extraordinary exactness the phenomena of hepatic colic followed by jaundice. In both instances the condition was revealed by operation.*

Treatment of Movable Kidney.—The literature of this subject

* *Lancet*, January 6, 1900.

has, I think, rather encouraged the belief that the only treatment of movable kidney is by operation. The operation of fixing the kidney in position by suturing has certainly been very extensively employed and possibly with some little lack of discrimination. The risk of the procedure is very slight, and possibly the mortality of the operation at the present moment does not exceed 1 per cent. Dentu has collected three hundred and seventy-four examples of nephrorrhaphy with seven deaths, but in only four out of this number could the death be ascribed to the operation. Keen, in a collection of one hundred and thirty-four cases, finds the mortality to be 2·9 per cent.

An operation, however, is neither justifiable nor commendable on the sole ground that it is attended with small risk. I have come to believe the nephrorrhaphy is by no means a routine measure in the treatment of movable kidney; that it is, indeed, not demanded in the great majority of the cases, and that, with one exception, it is to be regarded as the last, and not as the first, resource.

The operation is not always successful. The methods of performing it are legion, but there is no procedure which can claim to be infallible or to be exempt from occasional failure. By the earlier methods of operating failure was common. My experience leads me to believe that by all methods a lack of success is more common than is supposed or allowed. In dealing with a series of reported cases it must be remembered that it is only natural that in such records the successful case should find a place which is often denied to the case that fails.

Keen, in reviewing a series of 116 cases at a period of not less than three months after the operation, considered that 57·8 per cent. only were cured, 12.9 per cent. were improved, while in 19·8 per cent. the operation had failed.

Apart from the mere failure to maintain the organ in place, the operation has been followed in certain instances by considerable neuralgia, sometimes in the renal region and sometimes extending down the back and outer side of the thigh and leg. As in stone of the kidney so far after nephrorrhaphy, pain of a severe character has, on occasion, been experienced in the heel or in the sole of the foot.

The operation, I venture to think, is imperative in cases in which there have been "torsion symptoms," and the sooner it is carried out in such instances the better. In cases in which the symptoms of movable kidney are those of the ordinary type and in which all measures of treatment—short of operation—have failed, nephrorrhaphy may be considered; but I am under the impression that the instances of this kind in which the operation will be necessary will be exceedingly few. I venture

to think that a time is not far distant when suturing of the kidney will become one of the rare operations of surgery.

The treatment that appears to commend itself in the management of a case of movable kidney, causing symptoms (short of those of "torsion"), is the following: Treatment by rest in the recumbent position, with careful feeding, precise attention to the digestive organs, and general massage.

The so-called "rest cure" carried out for a month has not caused the movable kidney to cease to move, but it has rid the patient of her symptoms. In a quite large proportion of cases neurasthenia is the major element in the train of troubles complained of, and the treatment of this condition alone has sufficed to cause the movable kidney to be forgotten. In such instances the mobility of the kidney is probably the least important factor, although it is the only apparent or palpable one. A lady who is worn out by the unceasing turmoil of a London season, and who ascribes her many symptoms to a movable kidney, will often lose all her troubles after sufficient rest. The same may be said of the lady who hunts four days a week, and of the many women generally who "do too much."

While rest is not a panacea for all examples of movable kidney, it is at least an admirable preliminary to any more detailed treatment of the condition.

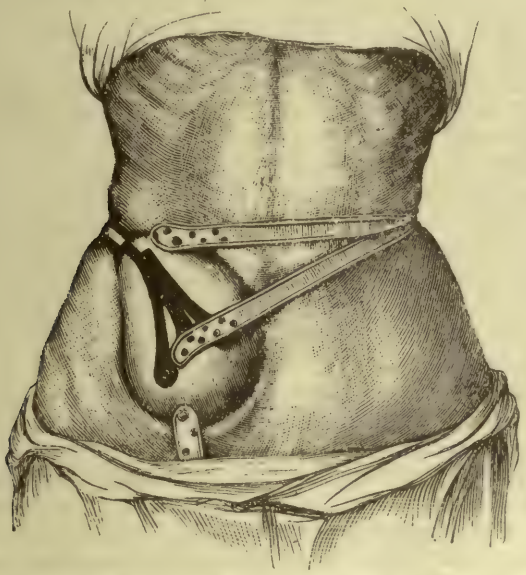
In 1895—at a time when, in common with other surgeons, I regarded nephrorrhaphy as the only remedy for movable kidney—I was consulted by a lady whose objection to this or any other operation was such that that method of treatment was not discussible. I had already found that the many belts, pads and supports designed for movable kidney were either utterly useless or at least quite unreliable. Now and then one would meet with a case of movable kidney in association with a very pendulous abdomen and some general enteroptosis, in which a belt proved to be of value or gave satisfactory relief. In the case of the lady in question I found that the kidney, which was very mobile, could be kept in place by the hand in all positions of the body and even during such movements as are involved in violent coughing, etc.

I asked Mr. Ernst to endeavor to make a truss, upon a pattern I suggested, which would reproduce the pressure of the fingers. One instrument after another was made, but they all failed. Fortunately neither the patient's patience nor Mr. Ernst's ingenuity were readily exhausted, and in due course was produced the instrument shown in the woodcut.

The instrument consists of a thin, carefully padded, metal plate which exercises pressure upon the abdominal wall by means of two springs.

The pressure concerns the lower and inner margins of the plate, so that the kidney is forced upwards and outwards. It

must of necessity be applied when the patient is lying down. It requires very careful fitting and adjustment, and it is useless to recommend the appliance to any patient who is not prepared to devote at least three or four sittings to the precise adjustment of the support. The instrument is light—weighing about six ounces—and is perfectly comfortable after it has been worn for a few days. Of its efficiency I can speak very definitely, for since 1895 I have abandoned the operation of nephrorrhaphy except in the following examples—cases in which there were torsion symptoms; some cases in which the patient would be residing in the tropics, many hospital cases in which the patient had to work for her living and could neither indulge in a long-sustained rest nor properly manage a truss requiring some delicacy in its adjustment.



Since 1895 Mr. Ernst informs me that he has made more than 300 of these trusses for patients in private practice. In 95 per cent. of the cases the truss has proved absolutely efficient; the kidney has been kept in place and the distress that had existed has entirely vanished.

With the truss on the patient has been able to take active exercise, to ride and in an occasional instance, to hunt.

It is needless to say that a truss will not cure neurasthenia. That condition must be dealt with by other measures. All that the truss claims to do is to keep a movable kidney from moving, and that—it may be pointed out—is all that the operation claims to do. In a large proportion of cases the truss can be given up at the end of 18 months or two years.

THE SURGICAL TREATMENT OF FACIAL PARALYSIS.

By FRANCIS MUNCH, M.D.,
Of the Faculty of Medicine, Paris.

Long regarded as an affection amenable exclusively to medical treatment, facial paralysis during the last few years has, little by little, fallen into the hands of the surgeon. We hasten to add, however, that it is not claimed that surgical intervention can usefully be invoked in all cases of facial paralysis. It is not proposed to add one more to the list of affections taken from the domain of medicine in favor of more drastic methods. The surgeon merely places the resources of his art at the disposal of patients whose affection has hitherto been regarded as incurable, their treatment having proved refractory to all means at present at the disposal of medical therapeutics. The surgeon thus merely completes the work of the physician, and his intervention, far from taking the place of medical treatment, commences where that ends; in other words, it merely enlarges the domain, and widens the horizon, of curative therapeutics.

The operation proposed in view of the treatment of facial paralysis consists in establishing anastomosis of the paralyzed facial nerve and a neighboring cranial nerve. The first recorded operation of the kind was performed by Dr. J. L. Faure, on the suggestion of Dr. Furet, in 1898, but it had already been performed by Mr. Ballance in England in 1895. In any event, Faure's proposal found little favor in France, for out of twenty-two observations which I have been cabled to bring together only one is credited to a French surgeon. In most of these cases the intervention comprised a spino-facial anastomosis; the peripheral end of the facial nerve, divided at its point of exit from the stylo-mastoid orifice, was joined in one way or another with the external branch from this nerve to the trapezius. In seven cases the anastomosis was between the facial and the hypoglossal nerve. The glosso-pharyngeal nerve has also been recommended as an alternative by Schaffer, of Edinburgh, but although the latter operation presents certain advantages from the functional point of view, its execution is so complicated that few surgeons are ever likely to avail themselves thereof.

The first question we have to ask ourselves is whether the proposed operation is rational. Is the facial graft legitimate in the light of our present physiological knowledge, and is it likely to obtain the object in view? In the light of current physiological views we may assume that section of a motor nerve is followed by loss of excitability on the part of the peripheral

end, which undergoes what is known as Wallerian degeneration. About thirty days after section of the nerve all that remains is the white matter of Schwann studded with nodules embedded in dried protoplasm. The changes bear on the entirety of the distal segment. The central part, on the contrary, remains intact. The extremity of the axis cylinder becomes slightly swollen, constituting a sort of "zone of growth," which subsequently extends by development of the axis cylinder. If the ends of the divided nerve have been brought together after division the axis cylinder granulates until it reaches the peripheral end, insinuates itself in the old Schwann's layer, and thus nervous continuity is restored.

It would seem, therefore, that anastomosis of the central end of an undamaged nerve with the peripheral end of the paralyzed facial nerve, followed by its regeneration, is a perfectly admissible fact from a histo-physiological point of view, at any rate in principle. We must not overlook the fact, however, that in facial paralysis of the third degree. that is to say, the very cases which are reputed to be medically incurable and therefore fall into the surgical domain, can only be identified as such after the lapse of a variable length of time. Whatever the delay, it must necessarily be of considerable duration, and in virtue of the principles enunciated above we must obviously abandon the hope of inducing the "zone of growth" of the central nerve to develop a connection with the fibrous remains which is all that is left of the peripheral part of the facial nerve. For this reason we are unable to attach much importance to the researches undertaken by Manasse and Barago-Clarella in experimental spino-facial anastomosis. In these experiments indeed, the anastomosis was invariably effected immediately after section of the nerves, and they teach us little with regard to the point under consideration, viz., whether in a grave and therefore ancient case of facial paralysis, we have any chance of obtaining nervous regeneration. These researches, moreover, add nothing to the knowledge already obtained by experiments long since carried out by Philipeaux and Vulpian on the crossed suture of the hypoglossal and lingual, etc., investigations which conclusively settled the point under discussion without leaving the slightest doubt as to the reality of the fact, *per se*, or on the possibility of the functional restoration after similar nervous conjunctions.

The histological researches carried out by Stewart at the suggestion of Mr. Ballance, present, from the point of view of spino-facial anastomosis, a vastly greater importance. On the strength of a series of histological researches, both experimental and clinical, these authors were led to conclude, in opposition to the generally received view, that the axis cylinder

is in nowise derived from a cellular body situated in the neuraxis or in the spinal ganglia. There is no question of prolongations derived from medullary neuroblasts insinuating themselves in the tissues to reach their muscular or cutaneous termination. According to Messrs. Ballance and Stewart, the axis cylinder is constituted by the fusion of an infinite number of segments. Each of these segments is built up of special cells, which play their part in the structure of the nerve sheaths, the nucleus whereof is attached to Schwann's sheath. In the interior of cells, Messrs. Ballance and Stewart have witnessed the appearance, some time after division of a nerve, of various elements which subsequently provide, some of them myosine, some of them a segment of axis cylinder. When the peripheral end of the nerve is not united to the segment that has remained in connection with its trophic centre, these changes soon ceased to take place—there is no "maturation." But if union be brought about, the fragments of axis cylinder become fused together and penetrate and traverse the sutures restoring connection with the central end.

It will be seen that this process differs greatly from the classical procedure. The peripheral segment plays an active, indeed a predominating, *rôle* in the regeneration of the nerve; moreover, the nerve cell, *per se*, no longer occupies the all-important position in the process of repair formerly attributed to it. The axis cylinder is relegated to the simple position of an offshoot of the nerve cell, being made up of the fusion of numerous segments, derived each from a different and non-central cell.

However this may be, the most important conclusion to be drawn from the researches of the English observers is, that the peripheral segment of a nerve, even though it has undergone complete degeneration, after months or even years, although it has become reduced to a mere fibrous cord, preserves nevertheless, Schwann's nuclei, which remain capable of renewed activity and enable the damaged nerve to become once again a conductor of nervous energy, provided it be linked up with the central segment of another nerve. It follows that the vitality of the nerve is not the point to be considered, since it is assured; it is, indeed, the state of the muscle that should occupy our attention, for upon its contractility will depend, in great measure, the result of our intervention. Obviously, if the contractility of the muscle is lost no nerve suture can be of service; in short, in discussing the propriety of an intervention it is to the muscle rather than to the nerve that we must look.

Most operators now adopt Faure's suggestion to make use of the spinal nerve for the purpose of suture with the degenerated facial nerve. It is important to divide the facial as close as

possible to the stylo-mastoid foramen in order to bring as long a segment of degenerated nerve within the sphere of influence as possible. The simplest plan in regard to the spinal nerve is to make use of the branch to the trapezius, which can easily be isolated at the spot where it enters the body of the muscle through which it has to pass. Some surgeons practise the anastomosis end-to-end, others lateral anastomosis, as, for instance, in the method adopted by Ballance, who splits the sheath of the spinal nerve by a small incision, into which he inserts the end of the facial. This procedure has the advantage of avoiding the paralysis of the mastoid and trapezius, and experience does not show any subsequent dragging thereon. Dr. Faure selected the spinal nerve in preference to the hypoglossus and glosso-pharyngeal, on the ground that it necessitated less manipulation. It must, however, be borne in mind that the destruction of the spinal nerve necessarily entails atrophy of the shoulder muscles with consequent paralysis. Moreover, the spino-facial anastomosis, when successful in restoring contractility of the facial muscles, determines synergical contractions in the shoulder, so that voluntary or involuntary contraction of the shoulder muscles is associated with corresponding contraction on that side of the face. Now the contraction of the facial muscles is, so to speak, the representation of the mental state, and it is obvious that under these circumstances any accidental movement of the shoulder muscles may give the face an expression quite out of keeping with the then mental state of the subject.

This drawback has led certain surgeons to prefer the hypoglossal in spite of the fact that its greater depth renders the operation much more difficult; moreover, the nerve is much smaller. A point in favor of the choice of the hypoglossal is that its cortical centre is much nearer that of the facial than that of the spinal; moreover, the medullary protuberances of the facial and hypoglossus are linked up by the posterior longitudinal tract. It follows that the re-education of the facial muscles, if this be possible, ought to take place much more readily with the hypoglossal than with the facial. Opinions differ as to the advantage attending this special method. Korte, for instance, considers the hemilingual atrophy and dysphagia which have been noted to be much more troublesome than the atrophy of the shoulder; but Bernhardt and Ballance both appear disposed to prefer the hypoglossus in future.

In estimating the value of surgical intervention in the treatment of facial paralysis from the twenty-two cases so far recorded, we must, in fairness, eliminate the "negative cases," that is to say, cases in which the operation is still too recent, and those in which, for special reasons, there was no justifica-

tion for believing the subjects to be capable of improvement. In most of the other cases the lesion was of comparatively recent onset, rarely exceeding from six to ten weeks. Gluck and Alexander, however, had cases of five years' standing. It is possible, however, that the length of the interval between the division of the facial nerve and its anastomosis exerts some influence on the ultimate result, since the best effects were obtained in cases where the division and the anastomosis were performed at one sitting.

The previous duration of the lesion, on the contrary, does not seem to affect the greater or less rapidity of restoration of function, and in this respect the most marked differences have been observed. Side by side with a case reported by Cushing, in which the first symptoms of improvement were noted thirteen days after the operation, or with one by Kennedy, in which movements of the upper eyelid were seen seven days after, there are others, the more numerous, in which months elapsed before the slightest indication of returning muscular power was observed. Speaking generally, it may be stated that we must not expect any marked improvement under six months. The age of the patient does not appear to have much bearing in regard to the return of functional activity.

In the cases in which grafting of facial nerve has been undertaken hitherto, the paralysis was invariably of peripheral origin. In the majority the nerve was accidentally divided in the course of an operation for aural caries; in others, as the result of a wound by firearms, or in association with fracture of the skull. In only one instance (Taylor's case) was the operation performed for paralysis *à frigore*, and not once for paralysis of obstetrical origin. Judging from the published cases, therefore, the indications for surgical intervention are tolerably limited.

To form a trustworthy opinion of the value of this intervention we must have before us a clear conception of its possibilities, and of what may reasonably be expected of it. Treatment of a paralysed facial nerve means attempting to restore to the muscles of the face a motility in every respect comparable with that of the pre-paralytic period. The object in view is the *restitutio ad integrum*, and it is only when this is possible that we are entitled to discuss "the cure of facial paralysis." This being so, we may state forthwith that in cases which have resisted medical treatment, even surgical measures may prove ineffectual so far as concerns complete integral restoration of function. The anastomosis of nerves cannot possibly replace matters in the *status quo ante*. It can only be palliative; in fact, as Dr. Faure puts it, it can only aim at "correcting, in the state of repose, facial asymmetry and restoring tonicity to the

paralysed muscles"—so that it is in reality a "cosmetic operation."

The disappearance of the facial asymmetry is therefore the principal—indeed, the only—benefit likely to accrue from the surgical treatment of facial paralysis. This result has been obtained, more or less, in a number of cases, though it is impossible beforehand to forecast with any degree of certainty to what extent the asymmetry will be corrected. It is only fair to add that, even taking things at their best, we are not justified in talking of "complete cure" of facial paralysis in these cases, as is so often done by enthusiastic partisans of surgical intervention. In the more successful cases—by no means in all—the facial asymmetry is modified with the muscles at rest. But it is only with the muscles at rest; for, after as before the operation, the play of the facial muscles is limited to one side of the face, the other half, corresponding to the anastomosis, remaining motionless. The only movements obtainable in this half of the face—after spino-facial anastomosis—are associated movements of the shoulder and face muscles. When the patient wishes to contract the facial muscles he has to raise the shoulder, so that the facial muscles no longer contract spontaneously in response to emotions, and, therefore, no longer reflect the mental state. In the twenty-two observations only one patient developed movements of the labial commissure in laughing. Even in this instance various interpretations are possible. We know, for example, that according to some anatomists the fibres governing the labial commissures have their deep origin in the hypoglossal nucleus. On the other hand, the association of movements between the shoulder and the face so that the facial muscles contract whenever the shoulder is raised, entails manifest drawbacks. The control which some patients seek to impose by grasping the motionless limb with the other hand is at best very imperfect.

We cannot disguise from ourselves that this is a very serious inconvenience. It remains to be seen how far it is possible to check this association of movements by systematic re-education. So far it has not been found practicable to suppress it to any tangible degree.

To sum up, grafting the facial nerve on to a neighboring nerve, may be the means of restoring a certain degree of tonus to the facial muscles, and thus in some measure remedy the asymmetry; but it cannot restore spontaneous movement to the facial muscles while, on the other hand, it often entails inconveniences not devoid of gravity. Moreover, the atrophy of the muscles previously under the control of the anastomosed nerve, which is inseparable from the procedure, is an unquestionable evil. Although in some cases the atrophy of the

trapezius or semilingual atrophy does not determine grave constitutional embarrassment, in others the results have been disastrous.

These various considerations explain, perhaps, why this operation, seductively ingenious though it be, has so far attracted comparatively few partisans; indeed, we may well ask ourselves whether it is not likely to be abandoned as falling short of its object, the inconveniences determined by facial paralysis being, after all, less serious than those caused by the operation undertaken for the relief of the former. However this may be, should this procedure acquire a position in practical surgery, it would appear preferable, judging from the observations at our disposal, to select the hypoglossal-facial graft, thus avoiding the more serious troubles resulting from the spino-facial graft.—*Medical Press and Circular.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

"Galloping" Typhoid Fever. By Doctors H. Roger and M. Salomon.

The doctors relate the histories of two cases, occurring in the Hospital of the Porte d'Aubervilliers. The former was that of a young woman, eighteen years old, who was taken suddenly ill with the usual early typhoid symptoms. On the second day, the rose spots were abundant and were soon followed by ecchymoses. She died on the eleventh day. The second case was that of a woman of twenty-three, who was in the hospital with her sick child. On the 4th of December, 1903, she began to show typhoid symptoms; on the 6th December the spots appeared, and on the 11th December she succumbed. At the autopsy of the latter, the local condition was not that which one usually finds at the end of the first week—an infiltration of Peyer's patches. Ulceration had already begun, and in the cecum the ulcers were confluent. In fact, it was the condition usually found in the third week.

In other similar cases, recorded in literature, we find many of the features of the two cases here mentioned. From the onset the progress is rapid. The nervous system is profoundly affected, prostration is extreme; delirium, loss of consciousness, incontinence of urine and feces complete the picture. Albuminuria is the rule. The early appearance of the rose spots and their rapid extension are specially characteristic of the two cases here recorded. The rule that the typhoid eruption appears at the end of the first week is not absolute. Curschmann says he has seen the spots on the second day. Some have seen hundreds of spots (Murchison). The face is never invaded by the eruption, or only once in seventy-three cases, according to Baümler. From the statistics of Leipzig and Hamburg, Curschmann found that about 3 per cent. died from the sixth to the tenth day.

There are two groups of cases which develop rapidly and prove fatal in a week or ten days. In the first group we find only a simple infiltration of Peyer's patches. The intestinal lesions are what we usually find at this stage. Death is due to a general intoxication. Such are the cases recorded by Trousseau, Murchison, Guizot and Curschmann. In the second

group it is not the intoxication of the system which characterizes the process; it is the rapidity of the local morbid changes. The process which usually occupies eight days, is here completed in forty-eight hours. The eruption appears early. The rapid march of the symptoms corresponds with the rapid development of the local changes. At the autopsy we find, on the eighth day, deep ulceration (Louis, Hoeffel, Forget). Murchison found intestinal perforation on the ninth day; Peacock on the eighth day.

May we suggest a possible explanation of the difference between these two classes of cases? The poisons of the typhoid bacillus are of two kinds. The former are diffused in the organism and give rise to general reaction; the latter, adhering to the pathogenic agent, exert a destructive action at those points where the microbe is multiplying. When the former process is more marked, the organism will succumb to the general intoxication, the local changes being typical. When the destructive materials are particularly active or abundant, the symptoms, both local and general, are hastened and the typhoid fever is "galloping."—Translated from *La Presse Medicale*, by HARLEY SMITH.

Pathogenesis and Treatment of Chronic Articular Rheumatism.

By Doctors C. PARHON and J. PAPINIAN.

The doctors relate a case of obstinate rheumatism and eczema in a man forty-seven years old, who in 1898 entered the hospital Pantélimon, receiving the iodine treatment and then bicarbonate of soda, both internally and in baths. He obtained some relief; but in 1902 began to suffer as before. Certain symptoms, such as constant sensation of cold, dryness of skin, absence of perspiration, suggested the possibility of thyroid insufficiency. Moreover, the good results obtained by Lancereaux, Paulesco, Hertoghe and Viala in administering thyroid in chronic rheumatic cases, induced the authors to try it here. The results were excellent.

Lancereaux and Paulesco believe that certain cases at least of chronic rheumatism are due to a change in the nervous system, and that the thyroid treatment furnishes that which is necessary to the maintenance of the normal condition of this system. Viala has obtained, with the thyroid treatment of these cases, an acceleration of the circulation, increase of the secretions, greater elimination of the organic waste matter, a lessening of the joint pains.

Disturbances in the functions of the ductless glands must play an important part in the pathogenesis of chronic rheumatism. The lessening of the thyroid secretion would create conditions specially favorable to the appearance of this dis-

ease. Ovarian insufficiency seems to act similarly in certain cases (Ord, Claisse). Changes in the action of the thyroid or ovaries may affect the assimilation of calcium, for our own experiments, like those of Sénator and Moraczewski, show that the thyroid gland intervenes actively in the assimilation of that element, whilst the ovary, antagonist of the former gland, favors the *disassimilation* of calcium. If, however, in most of their actions upon the changes in the body, these two glands have an opposite influence, it seems, on the other hand, to result from our observations that, as far as urea is concerned, both glands favor its formation or elimination. The quantity of urea eliminated in the urine is diminished both in thyroid and in ovarian insufficiency, and the administration of preparations of either of the glands increases perceptibly that elimination. May it be that diminution of urea eliminated is also a condition favorable for the development of chronic rheumatism?—Translated from *La Presse Medicale*, by HARLEY SMITH.

Tests for Albumin.

The delicate reagent of Spiegler, as modified by Jolles, is not nearly so well known as it should be. The test fluid consists of 10 grams corrosive sublimate, 20 grams succinic acid, 20 grams sodium chlorid and 500 c.c. distilled water. To 5 c.c. filtered urine is added 1 c.c. dilute acetic acid, and this mixture is, by means of a pipette, gently and gradually passed down the side of an obliquely held test-tube containing 4 or 5 c.c. of Spiegler's reagent, so that the acidified urine forms a layer on the surface of the reagent without mixing with it; if albumin be present, a sharp white ring appears immediately, and the precipitate will not disappear on warming.

There has been much demand among physicians for a safe and practical test for albumin in the urine, applicable at the bedside, or, at any rate, at the patient's home. For this purpose there is nothing better than the sulfosalicylic-acid reaction; the physician may carry in his pocket or medical case a small phial of dry crystals of this acid. To apply the test one simply drops a few crystals of the acid into a little fresh acid urine and shakes; if albumin be present, a precipitate will be formed or the urine will become turbid; even if only a trace exits, the urine will gradually become opalescent. This reaction, though very simple, is delicate enough; if the test yield a negative result the urine may be assumed to be free from albumin; if a positive result be obtained, the urine contains albumin, and a specimen should be taken to the physician's office laboratory and examined according to the outline given above.—*Journal A. M. A.*

Antitoxin in Diphtheritic Paralysis.

The rule is that the more severe the local manifestations of diphtheria the more extensive and lasting the subsequent paralysis. This is subject to marked exceptions; sometimes slight local involvement is followed by severe general paralysis. It has been stated that cases in which antitoxin is used have a larger proportion of paralyses than those in which it is not used. This is based on the observation that since antitoxin has been used the number of cases of diphtheritic paralysis has increased. This is readily explained by the lessened mortality. A larger number of the severe cases live to develop paralysis. A number of writers have reported improvement in cases of paralysis where antitoxin was used weeks after the local signs of the disorder had disappeared.—*Medicine.*

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. McILWRAITH, FRED, FENTON AND HELEN MacMURCHY.

Pyelitis in Pregnancy.

Cragin asserts that pyelitis, as a complication of pregnancy, is not so infrequent as has been supposed. He has seen ten cases of the affection in the past four years. The condition seems to depend on two factors: (1) Compression of a ureter by the pregnant uterus, and (2) infection of the urinary tract above the point of compression. The right kidney is most frequently involved. The symptoms are: Pain in the lumbar region; a rather sharp rise of temperature, not infrequently accompanied by rigors; irritability of the bladder; if the right side is involved the kidney can usually be made out enlarged and tender; the urine is acid, at first containing only a trace of albumin and perhaps a few casts, later pus cells, renal epithelium, and bacteria. The condition usually clears up without difficulty under appropriate treatment.—*N. Y. Med. Jour.*

Analgesia in Obstetrics.

T. Steinbuechel (*Brit. Gyn. Journal*, March, 1904) recommends the use of morphine and scopolamine hypodermically in doses of 0.01 gramme of the former and from 0.0003 to 0.0004 gramme of the latter—that is to say, 0.15 of a grain of morphine and from 0.0045 to .0006 of a grain of scopolamine. By this treatment he declares that the pain and suffering of the woman is much lessened, though her consciousness is not affected nor uterine activity diminished.

The Etiology of Ischuria in Retroflexion of the Gravid Uterus.

In discussing this subject Dr. Charles B. Reid summarizes as follows (*American Journal of Obstetrics*):

1. Retention of urine in retroflexio-version is not due to direct compression of the urethra, or neck of the bladder, whereby the lumen is mechanically closed.

2. It must be regarded as a form of "pressure paralysis" due to interference with the nerves supplying the bladder in some part of their course.

3. Compression of the principal motor nerve (pelvic nerve) is the most common source of retention. The part most subject to pressure is the pelvic ganglion lying near the great cervical ganglion of the uterus, although the nerve may be affected in any part of its course, either near its distribution to the bladder, or close to the sacral exit of the component fibres.

4. Compression of the sensory nerves, either in the course of the nerve, or peripherally (in the bladder) may also *rarely* produce retention.

5. Both afferent and efferent filaments may be affected simultaneously in a given case of retention, but the order is usually consecutive.

6. Pathological conditions of the pelvis and abdomen which irritate the sensory fibres of the bladder produce the so-called "irritable bladder."

7. Retention of urine post partum and after laparotomy for tumors is due to diminished intra-abdominal pressure, weakness of the abdominal muscles from over distention and the dorsal decubitus.

Missed Abortion.

Orthmann (*Zentralbl. f. Gynäk.*, Nov. 5, 1904) observed this condition in a woman aged 27, subject to mitral incompetence, who had already aborted twice. At the end of October, 1902, she came once more under treatment, and stated that she had not menstruated for five months. The uterus reached to the level of the umbilicus; the parts of the fetus could not be defined nor had the mother felt any movements. There was a little show four weeks later. At the beginning of January, 1903, the condition of the patient seemed unchanged, and towards the end of March a mummified fetus was expelled; it measured hardly $2\frac{1}{4}$ in., but had reached about the third month of development. There was very little liquor amnii. The fundus still lay midway between the umbilicus and pubes. After application of the tampon to the cervix, powerful contractions set in, and the placenta was expelled entire; it appeared as a cast of the uterine cavity 4 in. in length, 3 in. broad, and 2

in. thick. The placental tissues displayed extensive retrogressive changes; numerous minute white patches were detected, and they each showed central softenings so that they were becoming cystic. These changes had originated in degenerated villi.—*Brit. Med. Jour.*

Dysmenorrhea.

During the past year perhaps even more than the usual amount of attention has been devoted to this subject. It was the first subject discussed at the seventeenth annual meeting of the American Association of Obstetricians and Gynecologists held at St. Louis, September 13-16th, 1904. A paper was presented by Dr. Sellman, of Baltimore, on "Operative Treatment for Painful Menstruation in Young Virgins," and a discussion followed in which it appeared that some of the members were much inclined to more conservative methods and the avoidance of surgery. Dr. J. G. Brown, of St. Louis, remarked that his experience was that unless there was a palpable pathological condition present, it was better to leave these cases alone. Another physician spoke of an undeveloped condition of the uterus as a frequent cause.

Few physicians are sufficiently aware of the great influence which unsuitable clothing, late hours, constipation, nervous strain, and neurasthenic habits generally exercise over their condition. If girls and young women were allowed and encouraged to live sensibly, there would be fewer operations required for dysmenorrhea.

Medical Gynecology.

Some signs have appeared recently of reviving interest in gynecology. Neglect of diagnostic work and half-hearted efforts at proper local treatment result in many troubles both to the patient and the physician. It is always the most skilful and successful surgeons who are anxious to let those cases alone in which an operation is neither absolutely indicated nor likely to benefit the patient.

Sterilization of the Hands.

J. Rupert Collins, M.D., B.Ch. (*Brit. Med. Jour.*, June 11th, 1904), after a careful bacteriological inquiry into the sterilization of the hands, arrives at the following conclusions:

1. The nail brush used should be boiled before use, or better still, kept always in an antiseptic solution.
2. Vigorous scrubbing is required for at least five minutes.
3. The water should be as hot as can be comfortably borne.
4. Chemical antiseptics of efficient strength should be used for cleansing the skin, and it is preferable that they should be used in the primary washing as well as in the final soaking.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN, M.B., M.D.C.M.

Hot and Cold Water in Eye Diseases.

Nance states in the *Medical Standard:*

1. Heat and cold are best applied to the eye by moist pads. They are more efficacious when applied in this manner than by means of the coil or bladder, in that their action is more penetrating, and their effect is more germicidal.

2. The application of heat is indicated in degenerative corneal processes—interstitial and phlyctenular keratitis, corneal ulcers, pannus, infected corneal wounds, hyphemia, hypopyon, suppurative panophthalmitis, in iritis and cyclitis, in muscular spasm, and in contusion and ecchymosis of the eyelids ("black-eye") to hasten absorption of extravasated blood.

3. The application should be of the highest temperature the patient can endure, viz., 110° to 115° F.

4. They should be employed for a period of fifteen minutes, and repeated at intervals of two or three hours, for many hours.

5. Cold is indicated in hyperemia and inflammation of the conjunctiva. In purulent conjunctivitis it is the remedy *par excellence.* In traumatisms, especially those of the iris and lens, and in the early treatment of contusion of the lids, its employment is of value.

6. In purulent conjunctivitis iced applications may be continuously used for many hours so long as the cornea remains unimpaired, in which instance they are positively contraindicated.

7. Hot applications greatly assist the rapid absorption of various medicaments employed in ophthalmic practice, and when used for this purpose should immediately precede the instillation of such solutions.

Hot Water Directly Applied to the Cornea.

A method easy of application, and one followed by no accident, has been advocated in *Annales d'Oculistique* by Manolesco, of Bucarest. He has used direct applications of hot water in cases of deep infiltration of the cornea, especially in parenchymatous keratitis. After instillation of cocaine, the lids are separated, and water of a temperature between 70 and 80 degrees is dropped upon the cornea by a pipette. The treatment is given twice daily, and lasts from five to ten minutes. The temperature of the lower cul-de-sac is raised 1 degree, the

pericorneal injection increases, and any existing pannus becomes more pronounced, but this condition disappears in about five hours. The treatment hastens the absorption of the infiltrates, and shortens the course of the disease.

The Significance of a Discharge from the Ear.

Dr. Edward B. Dench (*Medical Examiner and Practitioner*) finds that out of 9,000 autopsies in Guy's Hospital (1869 to 1888) 57 cases were due to aural suppuration, or one case in every 158 autopsies.

During 21 years at the Vienna General Hospital there were 40,073 autopsies; of these, 232 were due to aural suppuration, or one case in 173.

In eight years in the New York Eye and Ear Infirmary there were 64,858 autopsies; out of these cases 4,836 had suffered from acute purulent middle ear inflammation, and 14,847 from chronic purulent inflammation. The author concludes:

"The findings at the time of operation on these cases show almost invariably that while the disease has been considered dormant, and while it has given rise to no symptoms, it has steadily progressed, the erosion of bone has continued until either the dura is exposed in the middle or posterior cranial fossa, or until actual infection of the brain substance itself has occurred. Even after the intracranial structures are involved, no serious symptoms may follow, until an acute process is suddenly grafted upon the chronic one; then symptoms of intracranial involvement rapidly supervene, and at this time it often happens shat surgical interference, although promptly instituted, comes too late to save the life of the patient."

Convergent Strabismus.

Dr. Wendell Reber (*New York Medical Journal* and *Philadelphia Medical Journal*) has been making a study of these cases and says:

1. Esotropia (turning of the eye inwards) is most likely to manifest itself before the third year.
2. Heredity certainly is one of the causes of strabismus.
3. The degree of deviation will be frequently about 30°.
4. Present-day evidence is against the theory of congenital amblyopia (poor vision).
5. The degree of poor vision increases with the length of time elapsing between the appearance of the squint and the time of treatment. (In other words, the longer the squint goes untreated, the greater the amount of amblyopia.)
6. Improvement may be expected in the amblyopic eye in 50 to 60 per cent. by proper glasses. after the seventh year.

7. If taken before the fifth year, there seems no reason why squint should not be cured by non-operative means in 70 per cent. of cases. This percentage will, in all probability, be increased to eighty per cent. in the next ten years.

8. The results of non-operative treatment in children, if adhered to with any persistence, are infinitely better than any "scissors" statistics thus far offered.

Dr. Reber closes his paper with a quotation from an article by Dr. Edward Jackson in the *Journal of the American Medical Association* for October 26, 1901: "The accurate correction of ametropia being the most important single measure in the treatment of squint, and this being most effective in the earliest stage, it follows that no one who cannot measure refraction objectively, no one who cannot apply skiascopy with sufficient accuracy to obtain by it the data for prescribing lenses, is competent to treat strabismus. This sounds like an extreme statement. Judging by old standards of attainment and old methods it is unduly so. But the experience of the last five years has established a new standard of success in the treatment of convergent strabismus in children, to be attained only by a method of which the foundation is the accurate correction of the refraction, and that at an age when the patient can give no assistance as to its measurement. In view of this, the milder statement simply falls short of the truth."

Editorials.

A RESIDENCE FOR MEN IN THE UNIVERSITY OF TORONTO.

The abolition of the residence of the University of Toronto a few years ago was considered a calamity by a large proportion of its graduates. One of the University's friends in Ottawa has recently handed over to the trustees the sum of $15,000, for the purpose of helping to establish a new residence for men.

Prof. G. M. Wrong, in a recent communication to "The Varsity," has made some valuable suggestions on the subject. He thinks that not less than $250,000 will be required to make a beginning that will be really felt, while four or five times this sum will be necessary to solve the problem completely. He points to the success of those who worked for the Convocation Hall, and considers that the erection of a residence should be the next task to which all graduates should turn. In considering the question of buildings, he says, the admirable Oxford system cannot be applied here in its entirety, and that we must work out our own system. It might be expedient to found a Men's Residence Association similar to that of the Women's Association, which would start with Mr. Whitney's gift as an incentive and effort. He finally asks, "What could the students do? They could show a resolute determination to help this plan, and let nothing else interfere with it. Let me say again, a residence for men is our most pressing need. We have dreamed about it long enough. It is time to do something. I am assured by business men that the money is not insuperable if those connected with the University are united for this one great improvement."

THE URIC-ACID FETISH.

One of the chief objects in living is to have our idols shattered. Most of us have practiced long enough to have seen the "liver theory" totter and fall. Formerly when the condition of the patient was obscure, it was the fashion to say, "Your

liver is out of order," and prescribe calomel or other intestinal antiseptic, under the impression they were acting as cholagogues. When physiology proved this to be entirely mythical, we straightway hugged another delusion. Men like Haig had iridescent visions of needle-shaped crystals of uric acid circulating in the blood stream, thrusting their tiny javelins into kidney cell or gastric gland, and producing a train of symptoms which they profoundly designated "uric-acid diathesis." And now for some years these sonorous words have played the part of the adverb when we were learning to parse, or as Woods Hutchinson said at the American Medical Association last year, "Uric acid has been the same sort of convenient saver-of-thought to us as therapeutists that the devil was to the older theologians."

But scientific thinkers have never felt satisfied with this explanation which did not explain, and the last few years have brought forward evidence which will send the uric-acid theory down the stream of time.

First and foremost, it was found that even in gout, the disease *par excellence* to demonstrate the soundness of this theory, uric acid was not found in excess in the blood stream, nor was there any change in the alkalinity of the blood. These two facts are attested by the leading chemists of the world to-day, and so the great corner-stone of this delusion must crumble to dust. A great deal of evidence of like kind has also accumulated. For instance, a large proportion of cases of gout (30 per cent.) arise from lead poisoning; still others from fermented liquor which contains no nitrogen in the molecule, and cannot therefore be a forerunner of uric acid; while some of the severest cases are the so-called "poor man's gout," in which the patient has taken neither alcohol nor meat in excess.

Furthermore, uric acid is often present in large quantities without causing the slightest symptoms, as in the uric-acid infarcts in the kidney of the new-born. In leukemia, phosphorus-poisoning and acute yellow atrophy, we find large quantities of uric acid in both the urine and the tissues, while the urine of any febrile condition in the early stage is almost identical with that of gout.

It would appear, then, that we have been mistaking results

for causes, and that uric acid was no more the exciting factor of gout than were Heberden's nodes the cause of rheumatoid arthritis. We must now look upon gout as a form of chronic intoxication attended by a disturbance of the normal production of bone, and closely related, in this respect, to rickets and arthritis deformans. Only in this way can we give a rational explanation to the many empirical remedies which have, for generations, exerted a deterring influence upon the disease.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

We desire to remind our readers that the annual subscription ($2.50) to the Medical Protective Association for the year 1905 is now due.

The experience of the officers of the Association during the last three years has shown them that issuing an annual appeal broadcast through the mails has not been successful in securing a large membership.

They are endeavoring now to bring the claims of the Association before members of the profession in a personal way. They feel assured that many physicians would willingly join the Association if solicited by personal friends.

It is hoped that all present members of the Association will assist by personally canvassing their friends.

It is also hoped that local medical societies in different parts of the Dominion will take the matter up in a regular systematic way, and urge the profession to assist in making this Association a large and strong one.

The Executive will make strong efforts to increase the membership this year.

CANADIAN MEDICAL ASSOCIATION.

The thirty-eighth annual meeting of the Canadian Medical Association will be held in Halifax, August 22-25 inclusive, 1905, under the presidency of Dr. John Stewart.

At a recent meeting of the Nova Scotia Medical Society, held in Halifax, it was decided that the Provincial Association of

Nova Scotia should act as hosts and entertainers of the Canadian Medical Association.

The local Committee of Arrangements has commenced work and is arranging the programme. The address on Surgery will be delivered by Mr. Francis Caird, of Edinburgh. The address on Gynecology will be delivered by Dr. Howard A. Kelly, of Baltimore. Subject—"Cystitis in Women." The address in Ophthalmology will be delivered by Dr. J. W. Sterling, of Montreal. It is expected that Dr. A. J. McCosh, of New York, and some other distinguished physicians from the United States will deliver addresses.

The General Secretary is now in communication with the transportation companies in regard to rates, and an effort will be made to have the transportation extended to Sydney, with return *via* Portland, Boston, or New York. Those intending to present papers or make demonstrations are requested to communicate with the General Secretary, Dr. George Elliott, 203 Beverley Street, Toronto.

TORONTO GENERAL HOSPITAL.

The following statistics show the continued increase in patients at the General Hospital since 1876:

1876	total	810
1878	"	973
1883	"	2249
1888	"	2977
1893	"	2779
1898	"	3211
1904	"	3811

In the last 28 years 67,036 patients were admitted, and there were 3,906 births, making a grand total of 70,932, or an average yearly number of 2,260 new patients. The house staff has been increased from two final year men to fourteen graduates, and is now probably the best and most efficient hospital house staff in either Canada or the United States. Over 225 graduates are numbered on the list of house-surgeons, only eight of whom are known to have died, a remarkably small mortality considering the exposure to disease in our profession.

The appointment of two official anesthetists was made last

October and is found to be most satisfactory, Drs. Duncan Anderson and S. Johnson having been selected for this work. Also two registrars, one medical and one surgical, were appointed at the same time, namely, Drs. Goldwin Howland and F. Marlow.

A new card system has been inaugurated, and the method of taking the history of patients is in the opinion of those competent to judge superior to that of any other hospital on this continent.

Dr. O'Reilly's life-work has indeed grown, and it must be gratifying to him to see the growth of the Toronto General Hospital and its increased usefulness during the years of his astute guidance.

ONTARIO MEDICAL ASSOCIATION.

The next annual meeting of the Ontario Medical Association will be held in Toronto, June 6, 7, 8 next, under the presidency of Dr. William Burt, of Paris. The Committee on Papers and Business is composed of Dr. A. Primrose, Chairman, and Doctors Powell, Ross, Macdonald, Baines, Rudolf, Thistle, R. A. Pyne, Clarence Starr, MacCallum, Ellis, Beemer and Price Brown.

We understand that a considerable number of papers are promised, and the committee is in a position to announce that Dr. Albert Ochner, of Chicago, Ill., will present a paper on surgery. The Committee of Arrangements is composed of Dr. Cameron, Chairman, and Doctors Reeve, Wright, Peters, Temple, Wagner, Scadding, Machell, Sheard, W. P. Caven, McPhedran, Parsons, Riordan, P. L. Scott, Goldie, G. B. Smith and Hamilton. Physicians who are willing to present papers are requested to communicate with the Secretary, Dr. Charles P. Lusk, 99 Bloor Street West, Toronto.

Dr. Burt, President of the Association, has sent his warmest New Year's greetings to all the members, requesting them to give every assistance in promoting the welfare of the Association.

OF INTEREST TO HOSPITALS.

IERZINO *v.* TORONTO GENERAL HOSPITAL.

A case was decided by Judge Winchester, the senior Judge of the County of York, a few days since, which is of peculiar interest to hospitals.

The action was brought by the plaintiff to recover from the Toronto General Hospital the sum of $160, which the plaintiff claimed had been taken from him by the defendant, its servants or agents. The facts in connection with the case appear sufficiently in the text of the judgment.

Mr. R. W. Eyre appeared as counsel for the plaintiff, and Mr. H. D. Gamble, solicitor for the Toronto General Hospital, appeared as counsel for the defendant.

Mr. Gamble contended for the defendant,—

That the defendant could not be made liable as bailee, for, if this was a bailment, the defendant was a gratuitous bailee, and that to make it liable gross negligence on its part must be shown, whereas, upon the evidence, no negligence whatever had been proved.

In answer to the charge that the money had been stolen by one of the servants of the defendant, he submitted that the defendant could only be made liable where the tort of the servant was within the scope of the employment, and referred to Cheshire *v.* Bailey, 21 T. L. R., 130, where the law is very clearly set forth.

He further submitted that the defendant could not be made liable by any analogy to inn-keepers, the law with relation to inn-keepers being peculiar, inn-keepers being one of the exceptions to the rule that bailees are not insurers of the goods in their custody. Among other cases, he referred to Cayle's case, 1 Sm. L. C., 11 Ed., page 119, which is the leading case on this subject.

He also submitted that boarding-house keepers not being responsible for the loss of their lodgers' property, and the defendant being in a very much stronger position than boarding-house keepers, inasmuch as the institution was a charitable one, making no profit whatever from the inmate, could not be held liable. He also referred to Holder *v.* Soulby, 8 C. B., N. S., 254.

The motion was dismissed.

The evidence on behalf of the plaintiff is to the effect that the plaintiff, being seriously injured in the head and body, was taken to the Emergency Hospital belonging to the defendant, and while there, $160 wrapped up in a handkerchief, and tied around his leg below the knee, was taken from the plaintiff by a ward tender in the defendant's service, and that he has not received

any part of the money since. The ward tender was arrested on a charge of the theft of this money, and a handkerchief was found in his possession, which the plaintiff stated was the one in which the money was wrapped. On the hearing of the charge of theft the ward tender was acquitted.

The evidence on behalf of the defendant contradicted that given by the plaintiff so far as to the place and manner of his undressing, and would indicate that there was no money taken from him either by the ward tender or any one else. Had the ward tender been called, and explained how he came into possession of the handkerchief claimed by the plaintiff, and showed that he did not receive any money in it, there would have been no necessity of reserving judgment in the case; but this was not done, although it was shown that the man was available.

In considering the evidence one cannot overlook the fact that the plaintiff during the whole time he was in the Emergency Hospital—a period of seven days—never once referred to this money; and although he received $4 money in a purse that was handed by him to one of the nurses when he entered the Emergency, and which was handed to him when leaving it, he did not refer to or ask for the $160 he now claims to have been taken from him.

The defendant is sued as being responsible for the actions of its servant, it being claimed that he took the money. The limits of liability of a master for torts of a servant are set out in Clerk and Lindsell on Torts, page 69, as follows: "Where the relationship of master and servant exists the employer is liable for all torts committed by the party employed, provided, first, they were within what is usually termed the scope of the employment; and, secondly, were either unintentional, that is to say, amounted to mere acts of negligence, or if intentional were intended to be done in the interest and for the benefit of the employer."

It is clear that if the money in question were taken by the ward tender as claimed, the taking was not done within the scope of his employment as set forth in the above limits.

The case of Holder *v.* Soulby, 8 C. B., N. S., 254, decided that the law imposes no obligation upon a lodging-house keeper to take care of the goods of his lodger, and, therefore, the lodging-house keeper was not responsible for the loss where the property of a lodger, who was about to quit, had been stolen by a stranger, who in the lodger's absence, was permitted by the occupier of the house to enter the rooms for the purpose of viewing them.

The defendant herein is not brought within the cases applicable to innkeepers, nor is it a bailee for hire, as the plaintiff paid nothing for the services rendered to him, nor was he

charged anything. In the Amer. and Eng. Encyc. of Law, 2nd Ed., it is stated that a public hospital or asylum is liable for the tort or negligence of an officer or servant, only when such corporation has been guilty of negligence in selecting such officer or servant. When the corporation has exercised due and reasonable care in the original selection of the offending officer or servant, it is not liable for his subsequent act, unless prior to the occurrence of such act knowledge of the unfitness and incapacity of such officer or servant was communicated to and fully brought home to the corporation. The evidence herein showed that the defendant in hiring the ward tender was not negligent, and that no complaint was made against him until the present case.

Not only upon the evidence, but also upon law, I am of opinion the plaintiff fails to prove his claim against the defendant.

The action will be dismissed with costs.

THE CONVOCATION HALL.

By R. A. REEVE, M.D.

The foundation-stone of the new Convocation Hall for the University of Toronto was laid on last Commencement Day (June 10). No more appropriate text in connection with the ceremonies could be found than the hitherto unpublished address delivered on that occasion by Dr. R. A. Reeve, the President of the Alumni Association. Dr. Reeve's words were as follows:

"Your Honor, Mr. Chancellor, Mr. Vice-Chancellor, Mr. President, Ladies and Gentlemen, and Fellow Alumni,—This is a glad day for those in whose case the 'hope deferred which maketh the heart sick' gives place to the joy of realisation with the goal in sight. Faith in the Alumni and friends of the University, at times sorely tried but never lost, to-day has its reward; and resting on this corner-stone it can easily see the copestone rising to its place.

"Upon the organisation of the Alumni Association four years ago it was felt that, in order to promote its vitality and growth, there should be work requiring effort, and some definite object aimed at. One project which met with favor was the scheme to secure a Convocation Hall for our Alma Mater, which had been without one since the disastrous fire of 1890.

"At first it was thought it would be a happy blending of fine sentiment and wise utility to base its claim to special sympathy on the ground of being a distinctively Memorial Hall, com-

memorating the patriotism of Alumni and Canadians generally who had fallen at Ridgeway and in South Africa; but this view not carry.

"It was not until later, when the Faculties had pledged themselves in a goodly sum, that the project gave hopeful promise of success. It was felt that the effort would afford almost a crucial test of the loyalty of the Alumni and of the good-will of friends of the University. That such confidence was not misplaced is shown by the fact that the sum of about $52,000 has been subscribed. Of this amount about $19,000 have been given by friends, upwards of $27,000 by graduates and—a most gratifying fact—upwards of $5,000 by undergraduates in attendance. It is a most pleasing duty to acknowledge again and place on record the timely and generous aid of the Government in the gift of $50,000 to duplicate the sum raised by the Alumni and by friends of the University. There can be little doubt that those who have a life interest in this academic enterprise will be the more likely to keep up an interest for life in their Alma Mater.

"Every great university should have a large Hall to hold the many hundreds of her students—a place where they can rally, and mingle, and see and hear one another. Not to have this is to lose an important means of promoting that *esprit de corps* which should prevail in every seat of learning, and which is at once a fine feature of the best college life, and a distinct factor in the best training of youth. In the large auditorium now assured, a budding Burke, Pitt, Macaulay or Gladstone, of high ideal and lofty aim, and as yet guileless, may have chance to win his first spurs before his sympathetic yet critical peers.

"Here in this trysting-place of mind and mind, the play of fancy, the weight of argument, the force of appeal will do their part as truly as university or college contests, as do the quick eye, the strong arm, the fleet limb on the campus or in the gymnasium hard by. There can be no doubt that this Hall will one day have a token of regard from the Royal Alumnus of 1860, who now graces the throne; and that as years roll by, wall and window, portrait and tablet will bear silent yet eloquent witness to the name and fame, the worth and work of one and another of the sons and daughters of our Alma Mater. And thus despite the contingeny of another Ridgeway or Paardeberg (which God forbid should be repeated!) this Hall will in time become a splendid object-lesson, pointing a moral of high order to the flower of the youth of our country who flock to its greatest seat of learning.

"It has long been felt that there is a certain loss of dignity, if not of prestige, in having to seek quite unacademic quarters for Convocation. There is a natural feeling that it enhances,

in a sense, the honor if not the value attached to a degree when it is conferred in the presence of great numbers, and in a hall that is historic or destined to become so. Moreover, it is proper that the patrons of the University and its many friends, whom no institution can afford to ignore, should have ready access to great events and important functions.

"Having this large Assembly Hall, the University and the Alumni Association will be able to invite distinguished men in the various walks of life to give addresses, lectures, sermons, etc., assured of audiences in an academic setting worthy of the occasion. These will, of course, have a distinct value educationally to the great student body, and prove of exceptional interest and importance. Functions of a social and other character, which tend to lighten and brighten the students' life, will also have special facilities in the Hall, whose various uses need not further be dilated upon."

An Explanation.

Mr. Editor,—In this connection a brief statement to the subscribers seems in order: The Convocation Committee have had no light task. The problem was to get the most suitable auditorium, to hold 2,000, and on the best site, without wasting money. As to the chamber itself, the aim was to secure the best results as to acoustics and ventilation, lighting and heating, ingress and egress. Much thought was given to the plans, and those by the University architects, Messrs. Darling and Pearson, were approved, with the auditorium of amphitheatrical form enabling the largest number to see and hear properly. The choice of the best available site—at the south-west limits of the University campus—was easier than securing it proved to be. Most of the ground required was held by the Dominion as part of the Observatory property. The Trustees, whose countenance and aid were, of course, necessary, offered another eligible site for a new observatory, which at any rate was required. The transfer was practically agreed upon, but was barred for a year or more partly owing to a misunderstanding which excited the hostility of the city and the Board of Trade. A solution was finally reached, and cordial assent given; and the Trustees in this way secured ample space for the Convocation Hall (and the new Physics Building). As one hundred thousand dollars had been promised ere the site was secured, the decision to proceed at once with the building naturally followed: and the corner-stone was duly laid. At that time it was thought the cost would exceed but little the amount raised. This not proving to be the case, new plans were drawn and were modified from time to time, to reduce the expense, always having in mind a Hall which would be a credit to our

Alma Mater. Such a one the Committee believe the architects have given us, after the model of the Sorbonne theatre known to architects the world over. An earnest effort is being made to meet the extra cost, and further subscriptions may be called for. Indeed, the trustees would be justified in taking the balance required out of the Endowment Fund, temporarily at least. At any rate, the immediate erection of the Hall seems assured. To Sir William Mulock the special thanks of the Alumni are due for his kind offices as a member of the Dominion Cabinet. To the General Secretary of the Alumni Association we owe a great debt of gratitude for his indefatigable efforts in securing subscriptions and in organizing the movement.—R. A. REEVE.

—*University of Toronto Monthly.*

Toronto University—The Professor and his Salary in the Faculty of Medicine.

The highest salaries are paid to Drs. A. Primrose and J. J. McKenzie, amounting to $2,000 each; and the following is a list of some of the others: I. H. Cameron, $910.25, F. Le M. Grasett, $949.65; G. A. Peters, $910.25; L. Teskey, $949.65; A. McPhedran, $910.25; J. L. Davidson, $949.65; C. Sheard, $949.65; J. A. Temple, $949.65: A. H. Wright, $910.25; W. Oldright, $910.25; J. F. W. Ross, $606.70; J. M. MacCallum, $856.70; H. B. Anderson, $633.10; N. A. Powell, $633.10; R. A. Reeve, $364.02; G. R. McDonagh, $364 02; W. H. Ellis, $303.91; G. S. Ryerson, $253.24; G. H. Burnham, $242.68.

Associate professors—G. A. Bingham, $633.10; A. M. Baines, $633.10; J. T. Fotheringham, $633.10; W. P. Caven, $606.70; H. W. Aikins, $606.70; H. A. Bruce, $485.40; Dr. J. G. Wishart, $303.84; F. N. G. Starr, $364.10; J. A. Amyot, $364.10; W. B. Thistle, $364.10; R. D. Rudolf, $364.10; A. R. Gordon, $364.10; R. J. Dwyer, $364.10; C. L. Starr, $364.10; H. T. Machell $254.87; W. T. Stuart, $500.00.—*The News.*

The fifth meeting of the International Society of Obstetrics and Gynecology will be held in St. Petersburg, September 11th to 18th, 1905.

The appointment of Dr. G. L. Milne, Dominion medical inspector and immigration agent for the port of Victoria, as a justice of the peace has been gazetted. This will enable Dr. Milne to prosecute his duties on incoming vessels much more expeditiously than heretofore.

Personals.

Dr. Walter Wright, of Toronto, went to California, Jan. 9th.

Dr. W. J. McCollum, of Toronto, has moved from 168 Jarvis Street to 94 Shuter Street.

Dr. Edward Fahey, a graduate of Queen's, was married Jan. 12th, to Miss Joyce, of Rochester.

Dr. Chas. Richard Charteris, of Chatham, has been appointed Associate Coroner for the County of Kent.

Doctors Jno. McCollum, Arthur Wright and John Cochrane sailed from New York for England, Jan. 14th.

Dr. J. W. Bruce Smith, Inspector of Hospitals, formerly of Brockville, is now living at 412 Markham Street.

Dr. Donald McEachren, of Linwood, has been appointed Associate Coroner for the County of Waterloo.

Dr. Jno. H. Knight, of Wallaceburg, has also been appointed an Associate Coroner for the County of Kent.

Dr. Sylvester, of Toronto, went to New York, Jan. 19th, and expected to remain in that city about two weeks.

Dr. Jas. F. W. Ross, of Toronto, went to California, Jan. 29th. He expects to return to Toronto and resume practice about April first.

Dr. Geo. McDonagh, of Toronto, sailed from New York, Jan. 26th, for the Mediterranean. He expects to return to Toronto in March.

Dr. W. H. B. Aikins, of Toronto, will sail from New York, Feb. 18th, for Italy. After spending a few days at Naples, Genoa and Venice he will go on to Vienna, where he expects to remain two months.

Selections.

Chronic Posterior Urethritis—Treatment.

In all cases of chronic posterior urethritis, not only is the mucous and the submucous tissue of the prostatic urethra involved, but in addition rectal examination generally shows an enlarged, tender prostate gland, due to follicular inflammation and consequent general hyperplasia.

Aside from recurrent urethral discharge, the most prominent symptoms are those of sexual neurasthenia, and more or less constant irritability of the bladder. Frequent and imperative urination, with constant pain at the end of the penis, pain and fulness in the perineum, slight vesical tenesmus, sexual debility, as shown by imperfect erections, premature ejaculation, and prostatorrhea, together form a chain of symptoms which, following upon a recent attack of gonorrhea, point unmistakably to the existence of a chronic inflammation in the deep urethra.

Those cases in which vesical irritability is the most prominent symptom Christian (*Therapeutic Review*) treats by irrigation of the deep urethra with solutions of either potassium permanganate 1:8000, increasing the strength to 1:4000, or nitrate of silver 1:8000, increasing to 1:4000. This irrigation is followed by instillation into the deep urethra of about ten drops of a one-per-cent. solution of nitrate of silver. Irrigation is performed by the introduction into the deep urethra of a soft-rubber catheter to which is attached the nozzle of a fountain syringe. About eight ounces of the irrigating fluid is allowed to pass into the bladder, when the catheter is slowly withdrawn, the solution passing through it and irrigating the prostatic urethra as it is withdrawn. After removal of the instrument the patient expels that portion of the irrigating solution which entered the bladder, thereby bringing still more of the medicated solution in contact with the mucous membrane of the pars prostatica.

This treatment, followed by deep injections of nitrate of silver, should be repeated every four days. The strength of the silver solution used in the deep injection should be gradually increased from one per cent. to two, three, four, five, and as high as ten per cent.

A most valuable and necessary adjunct is systematic massage of the prostate gland, not oftener than once a week. To be most effective the prostate should be stripped when the bladder is filled with the silver or permanganate solution. Immediate evacuation washes out the secretion expressed from the gland.

Some cases even with this are intractable. When no improvement occurs under the above treatment, all forms of

local treatment should be discontinued, and tonics, of which the best are nitromuriatic acid and strychnine, should be administered.—*Therapeutic Gazette.*

The Effect of Alcohol and Alcoholic Fluids upon the Excretion of Uric Acid in Man.

To the *American Journal of Physiology*, Beebe contributes the result of an original research on this subject.

After a consideration of his experiments, it hardly seems possible to doubt that alcohol, even in what is considered by the most conservative as a moderate amount, causes an increase in the excretion of uric acid. And this effect is seen almost immediately after taking the alcohol.

The following points indicate that the effect is due to a toxic effect on the liver, thereby interfering with oxidation of the uric acid derived from its precursors in the food:

1. Alcohol taken without food causes no increase.

2. There was a smaller increase in excretion in one experiment in which the diet contained much less purin than it did in another experiment.

3. The maximum increase occurs at the same time after a meal as it does when purin food but no alcohol is taken.

4. The purin bases are affected to the same degree as the uric acid.

5. Alcohol is rapidly absorbed and passes at once to the liver, the organ which has most to do with the metabolism of proteid cleavage products.

There is no evidence that the alcohol has merely hastened the excretion of urates normally present in the blood; the increased excretion means that a larger quantity has been in circulation, and although it is classed by Von Noorden among the substances easily excreted, still most physiologists would consider the presence in the blood of this larger quantity as undesirable. Certainly in pathological conditions it might be harmful.

If we accept the origin of the increased quantity of uric acid to be in the impaired oxidative powers of the liver, the results of these experiments will have greater significance than can be attributed to uric acid alone. For the impaired function would affect other processes which are normally accomplished by that organ, and the possibilities for entrance into the general circulation of toxic substances, of intestinal putrefaction, for instance, would be increased. The liver performs a large number of oxidations and syntheses designed to keep toxic substances from reaching the body tissues, and if alcohol in the moderate quantity which caused the increase in uric acid

excretion, impairs its power in this respect, the prevalent ideas regarding the harmlessness of moderate drinking need revision.

Alcohol is a food in the sense that when used in small quantities the energy from its oxidation may be used for some of the body needs; but since, at the same time, it interferes with the normal activities of a most important organ, its food value may be overbalanced by its toxic effect. Salt water may be used in the steamboiler, and the steam from its evaporation may transmit the energy of the fuel to the revolving wheels, but its corrosive action on the steel forbids it use, like alcohol, except in emergencies.—*Therapeutic Gazette.*

The Use of Oxygen in Association with the Administration of Chloroform and Ether.

The proposition that oxygen should be administered with chloroform and ether for the purpose of preventing accidents during the maintenance of their effects, and for the purpose of preventing untoward sequelæ, was received by the profession, about fifteen years ago, with considerable enthusiasm. For a time surgical instrument makers busied themselves with the manufacture of special inhalers whereby the patient would receive the vapor of ether or chloroform mixed with oxygen gas, and in not a few instances these inhalers were so devised that the patient was for the time being forced to exist under the mixture of ether vapor and oxygen gas, having been deprived by a tight-fitting inhaler of all atmospheric air. In most of these necessarily complicated forms of apparatus the oxygen gas was supplied through a tube, which first passed through the anesthetic. It was therefore impossible for the anesthetizer to increase or decrease the anesthetic vapor without at the same time increasing or decreasing the oxygen gas. This was a serious disadvantage, and as we have pointed out on several occasions, the proper way to employ oxygen gas, with either of these anesthetics, is to have the gas delivered through a tube which can be passed under the ether cone and chloroform inhaler, and through which oxygen gas may be supplied in varying quantities without changing the amount of anesthetic which the patient is taking into the lungs.

The object of this editorial note is to reiterate our belief in the value of oxygen in conjunction with surgical anesthesia, to impress upon our readers the disadvantage of employing a complicated inhaler when the simplest form of inhaler can be used to better advantage, and to call attention to an interesting experimental research which is published in the *Medical Record* of November 19th, 1904, by Dr. James Gwathmey, in which he proved by experiments upon animals that chloroform with

oxygen gas is more than twice as safe as chloroform and air, and he believes safer than any other anesthetic with air; or, to express it otherwise, he believes that if oxygen is used with chloroform it becomes as safe as ether. More important still, he concludes that oxygen decreases the danger of anesthetics, as regards life, without decreasing their anesthetic value.—*Therapeutic Gazette.*

Treatment of Lupus by the Non-Specialist.

Dreuw announces that he has worked out a simple, inexpensive technic which is proving an effectual cure for lupus and can be applied by any practitioner. It consists in first freezing the lupus patch with ethyl chlorid and then rubbing into it crude hydrochloric acid saturated with free chlorin. He has thus treated 25 patients and the results, he thinks, justify the statement that any practitioner can now successfully treat lupus. He rubs the acid into the patch with a cotton-wound toothpick. In contact with tuberculous or lupous tissue, it induces immediately such an immigration of leucocytes that it is almost impossible to detect the tuberculous or lupous character of the tissue afterward. This immigration is much more extensive than has been observed hitherto under any circumstances. Even long-established cases of lupus yield to this treatment, and in three patients treated more than a year ago there has been no tendency to recurrence. The treatment is equally effectual for tuberculous abscesses and fistulas, applied under narcosis. Phototherapy was not used in any of his cases, but he thinks that a combination of the two methods might be advisable.—*Journal A. M. A.*

Triumph of an Internal Disinfectant in Phthisis and Other Severe Infectious Diseases.

Dr. Konrad Küster is "privy councillor of the public health" (Geh. Sanitätsrath) at Berlin. In this article he does not hesitate to proclaim that a remedy has been found which promptly and energetically destroys bacilli while, even taken internally in large doses, it has no injurious action on the human organism. The remedy in question is a meta-iodo-ortho-oxy-chinolin-ana-sulphonic acid combination manufactured by the German chemists under the name of loretin and offered as a substitute for iodoform. Physicians were weary of new drugs and paid little attention to the announcements of Professor Claus, of Freiburg in regard to the surprising bactericidal powers of the proposed substitute for iodoform. A Freiburg layman, however, saw some of these notices and tested the drug on himself, taking as much as 75 grains at a time without ill results. He gave it to advanced consumptives, and after a

few months their friends were amazed at the improvement. The results in scarlet fever and diphtheria were equally striking and the layman published a pamphlet on the subject, which attracted no attention. He then presented his data to medical circles, where he finally obtained a hearing. Küster was one of those who have been testing the drug extensively, and he waxes enthusiastic over its efficacy in infectious diseases, even the severest. The drug is eliminated apparently unmodified by the intestines, kidneys, lungs and mucosæ, thus following the bacilli into their favorite haunts. He is thoroughly convinced that in "griserin"—as the drug has been renamed—a remedy has been found which will place internal medicine—hitherto the Cinderella—on a par with triumphant surgery. He adds: "It will then be more of a joy than ever to be a physician, as we can be certain to cure the severest illnesses by careful individualizing use of this remedy. This will cut the ground away from under the feet of charlatans who flourish mainly on account of the limitations of our art in the past." The Birkenweder sanatorium has set aside an entire department, in charge of Küster, for patients taking the new remedy. He describes his experiences with it in detail, all bacterial affections apparently going down like card houses before it. The favorable results in cancerous affections suggest a bacterial origin. Diabetes alone, and possibly articular rheumatism, proved rebellious.—*Journal A. M. A.*

Lymphangioma Cavernosum with Chylorrhea.

At the Gesellschaft, Paul Albrecht demonstrated a case of lymphangioma cavernosum with chylorrhea. The swelling had commenced some six years ago over the right femur, extending into the groin. The surface was white and soft, and over the surface of the greatest prominence were large vesicles averaging about the size of a pea, which emitted a clear fluid. If the patient took fatty food fleshy warts appeared on the surface, in the centre of which yellow coloring matter was observed. Tests with sesami oleum and alkanna root failed to demonstrate its chylous nature, but the presence of sugar, fat, and albumen gave undeniable proof of its presence. Within the last two weeks a similar swelling has commenced in the left groin. Neumann reminded the members of a similar case that he had exhibited to them two years ago. In that case he administered different coloring matters by the mouth, which acted on the lymph, giving a similar hue one and a half hours after. Albrecht's case differs in this respect, as he seems to have failed to obtain this coloring in the lymph. In my own case it may be remembered that Eiselberg extirpated the white swelling, and found the entering lymphatic vessels as large as goose

quills. Franck said he had a young man some time ago who came to him with prominent lymphatic varicose ducts in the right leg, extending from the foot to the groin. Where the varix was present, when opened it was found to contain a small quantity of milky fluid. Eiselberg said that he had now seen two cases of lymphangioma with a considerable discharge of milky fluid. The therapy of this disease does not seem to meet with much success, but the earliest and most reasonable to recommend is the Paquelin treatment.

Weinlechner briefly recounted the history of a case that came under his own observation in the form of a large cyst which extended from the arm-pit to the pelvic bones.

Riehl next entered into the pathology of the disease and described the origin of the morbid changes as a malformation, probably hereditary, in the position of the lymphatic vessels, or in other words a lymphatic nevus, which commences at first in a small area, and extends along the endothelium increasing the lymphatic vessel until a cyst is finally produced.

The history of the case before us admits of this interpretation: commencing six years ago it gradually increased, and invaded the neighboring structures, until the whole leg was involved with cystic formation of chylous matter. The chylorrhea in this case is more prominently demonstrated by the inguinal lymphatic vessels of the left side of the pelvis becoming involved from the same anomaly in the anatomy as existed in the right side. Albrecht pointed out the difficulty of accepting the theory of a lymphatic nevus by repeating the patient's history, that the cystic tumor in the left inguinal region was only discovered a few weeks ago, and that the skin covering the cyst was found to be in a normal condition.—*Vienna Correspondent, Medical Press and Circular.*

Venereal Warts.

Resorcin is recommended by Rohrer as superseding all other local applications:

℞ Resorcini ..... gr. xv.
Liq. petrolati ..... ℥j.
M. Fiat unguentum.

Sig.: To be applied locally after thoroughly cleansing the parts.

The following combination is quoted as being a very valuable caustic:

℞ Plumbi oxidi ..... gr. ij.
Potassii hydrastis ..... gr. xx.
Aquæ ..... q. s. ad ℥j.

M. Sig.: Shake well and apply, by means of a brush, to the lesion. One or two applications are sufficient.—*Journal of the American Medical Association.*

Miscellaneous.

The Heart in Typhoid.

The profound typhoid disorders of the heart are dependent on parenchymatous degeneration of the myocardium as well as upon a true myocarditis. The different forms of parenchymatous degeneration are due to the interstitial inflammatory process and also to the obliterating endarteritis of the smallest arterial branches of the myocardium.

The above conditions may be well developed about the third week of the disease with the accompanying dilatation which produces an insufficiency of the valves, hence giving the characteristic murmurs, provided there has been some over-exertion on part of the patient. Although in typhoid as in rheumatism many have a sclerosis of the valves, due probably to the infection, it is more commonly due to dilatation depending on the myocarditis. Typhoid patients with the myocarditis which corresponds with the degeneration of the voluntary muscles of the body if allowed to exert themselves too violently, often causes collapse and death from acute dilatation. This is generally considered as a fact, and in acute rheumatism the patient is generally warned against over-exertion for some time after the acute stage is over, especially if there is any suspicion of involvement of the valves of the heart.

In the convalescence of typhoid the patient should also be equally warned, because this constant over-exertion will eventually produce a permanent dilatation and, therefore, as complete incompetency of the valves as the sclerosis of the valves which is seen so commonly as the result of acute articular rheumatism.—*Charlotte Medical Journal.*

Medicine as a Preliminary Training.

According to Sir Conan Doyle, there is nothing so useful, as a preliminary training, as a course in medicine. There was a time, says he, when a young man who was going to do anything in the world, was passed mechanically through the bar. I believe the time will come when the similar young man will be passed through medicine, because I know no other means by which he could get to the fundamental and absolute facts of life. The mere fact that in his training a man has to undergo so searching an ordeal in the most critical years of his life, and pays such enormous attention to detail, is in itself evidence that he receives a splendid training. I have always said that to a man who has mastered Gray's Anatomy, life has no future terrors. If our young army officers had five years' study in the same sense that the young medical man has five years' study we should become the terror of Europe.—*Merck's Archives.*

Value of Stypticin.—Dr. Martin Freund (*Therapeutische Monatshefte.*

Stypticin is, as should be well known by this time, the hydrochlorate of cotarnin, a base prepared from the opium alkaloid narcotin. It is closely allied to hydrastinin hydrochlorate, the hemostatic properties of which are so generally known. The author shows that the hemostatic properties of stypticin reside in its base, cotarnin, and the acid with which the cotarnin is united is of no importance—just as the anodyn and hypnotic properties of the morphin salts reside in the morphin and not in the sulphate, hydrochlorate, acetate, etc.

Dr. Freund thus summarizes the indications of stypticin :

1. It is useful in hemorrhages of the menopause.

2. In hemorrhages from subinvolution of the uterus, provided the subinvolution be not due to fetal or placental débris.

3. In reflex (secondary) hemorrhages—that is, hemorrhages caused by diseases of the adnexa of parametrium, without any involvement of the uterus.

4. In congestive menorrhagia of young girls, without a pathological basis.

5. In myomata.

6. In hemorrhages during gestation, stypticin being devoid of oxytocic properties.

Stypticin has proved useful also in hemoptysis and intestinal and vesical hemorrhage. The usually effective single dose is two tablets of ¾ grn. each, which dose may be repeated four to five times a day. Almost ten years' experience has shown that the drug, even in large doses, is devoid of bad by-effects.—*The Post-Graduate.*

Books a Medium of Tuberculous Infection.

During the past year a number of clerks employed in a Berlin library contracted tuberculosis. This led to having an examination made of a number of books in the library. Thirty-seven volumes of popular fiction which had been in use from three to six years, and which showed signs of much wear, were selected. Steeping the corners of the leaves and the most soiled parts of the paper for twenty-four hours in normal salt solution and rubbing the bindings with the same, the washings were centrifuged, but they failed on examination to reveal the bacillus of tuberculosis. Fifty guinea-pigs were then injected with the water under proper precautions, and when at the end of three and a half months the forty-three surviving were killed, fifteen, or 35 per cent., were found to have tubercle in various organs. Similar experiments with sixty other volumes that had been for from six months to two years only in use, but being of a different class of literature were in less request

and were in a more clean condition, gave when similarly treated wholly negative results. This matter of dirty library books is one that health boards cannot afford to neglect, for doubtless many a case of tuberculosis might be prevented by the timely disinfection of such books by the use of formaldehyde.—*Medical Age.*

Head Nurses.

The personality of the head nurses of a hospital, their ideals of life and character and work, will determine to a great extent the atmosphere of the wards and the quality of the work. As the head nurses are, we may reasonably expect pupil nurses to be. If the head nurse is lacking in dignity, with a flippant, careless manner, unduly free in her intercourse with physicians and people, disloyal to hospital authorities and interests, harsh or mechanical in her bearing toward the patients, it is not to be wondered at if the same spirit finds expression in the daily work of the nurses whom she directs Example is ever more powerful than precept, and personality—that indefinable something, which gives peculiar color and tone to the individual, and stamps his work as peculiarly his own—that is the thing that will tell in the lives of the nurses. A beautiful building, costly furnishings, expensive equipment, a carefully arranged course of study, skilful lectures—these are all desirable, and some of them valuable aids in the training of nurses, but the combined influence of all these is small, compared with the character, the inner life, of the head nurses of a hospital.—*The National Hospital Record.*

A Novel Method of Treating Drunkenness.

Drunkenness, which has of late years developed to an alarming extent in Norway, has caused the authorities of that country to try an original method of curing drunkards of their vice. A foreign exchange gives a brief outline of the method pursued, which is as follows: The drunkard is carefully locked up in a room from which all communication is cut off. He is given for food bread which is soaked in port wine. At first the individual eats his bread with pleasure. A few days suffice to make him thoroughly disgusted with it, and after about eight days of this form of diet he is allowed other food. The disgust acquired by this procedure is as a rule lasting. The very simplicity of this method will commend it as worthy of a trial.—*Medical Age.*

A Fort Worth druggist is in receipt of a curt and haughty note, in an angular feminine hand: "I do not want vasioline but glisserine. Is that plain enough? I persoom you can spell.—*Texas Medical Gazette.*

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Original Communications.

EXCISION OF THE WRIST.*

BY FREDERICK W. MARLOW, F.R.C.S., (ENG.).

The operation of excision of the wrist as described by Lister, in 1865, involves not only the complete removal of the carpus, but also a portion of the lower ends of the radius and ulna and of the bases of the metacarpal bones as well. It is performed chiefly for tuberculous disease, the object of such a complete operation being the entire removal of all articular surfaces and the complete eradication of all the complicated, contiguous, synovial membranes of the various joints, on account of their liabilty to rapid involvement whether the disease commences in the synovial membrane, the lower end of the radius or elsewhere. But even in tuberculous cases, although perhaps not wisely, it has been subjected to many limiting modifications, and undoubtedly it is the case that when the operation is called for by other indications, a more limited one will often suffice, the conditions presented by the individual case being taken as a guide to the amount of necessary removal of bone.

Besides tuberculous disease, which unfortunately occurs more rarely alone, and isolated in the wrist than in any other joint, conditions from which indications for its excision, either partial or complete, may arise, are infection resulting in necrosis and chronic suppuration; wounds, especially of the gun-shot variety; ankylosis in a markedly faulty position: irreducible dislocation of the wrist or subluxation of the lower radial epiphysis, and compound, comminuted fractures of the carpus or lower end of the radius.

*Read at the meeting of the Toronto Medical Society, February 16th, 1905.

In considering the advisability and applicability of excision of the wrist it is important to observe carefully the general condition and fitness of the patient as well as the local condition present. It is essential that the vitality and recuperative power should be undeteriorated by phthisis or by any marked degree of amyloid disease, chronic sapremia or other organic disease, the desirable age limit being not less than five nor more than forty-five years. As regards the local condition due consideration should be given to the extent of the disease in the joint, the condition of its surrounding parts, the presence of acute disease, and to the possibility of thoroughly removing the diseased parts and preserving for the patient a useful hand. No definite rule can be formulated, and it is necessary to judge each individual case by the actual condition present. Should the involvement of the bones and their destruction be great, and the soft parts extensively destroyed by sinuses and the muscles much atrophied, or should acute disease be present, the case would in all probability be considered unsuitable for the operation.

Of the methods of operating, the most frequently employed are those of Lister, Ollier, Langenbeck, Konig and Kocher. The former two are characterized by a metacarpo dorso-radial and a metacarpo-carpo ulnar incision differing somewhat in each case, and in Ollier's method a short incision is added on the radial side for purposes of drainage. In the latter three a single dorsal incision alone is used, that of Langenbeck being a metacarpo-dorso-radial, while Konig's is a similar one, though not so extensive, in an upward direction, whereas Kocher's is a metacarpo-dorso-ulnar one. All are complicated and tedious, as must always be so, and the method chosen should be the one that would seem to facilitate the operation in the individual case. Remembering the principles, the requirements and the possibilities of the operation, with the extent of the disease as a guide and with an accurate knowledge of the anatomy of the part, though this is often much obscured by the disease, the details are best worked out as the operation proceeds. No diseased bone or synovial membrane should be allowed to remain and if it be found necessary to perform so complete an operation as Lister described, such should be done. It should always be borne in mind, however, that a better result is likely to ensue if it is possible to preserve intact some of the structures which are divided in Lister's operation, namely, the tendinous insertions of the radial and ulnar extensors and the ulnar flexor of the wrist and the origin of the thenar and of the hypothenar group of muscles. If it is possible to complete the removal of the diseased parts without sacrificing more than the upper and lateral articular cartilages and

surfaces of the metacarpal bases, and at the same time to leave the trapezium, the pisiform and the hook of the unciform, such preservation may be accomplished. Before the actual operation is commenced an attempt should be made to freely flex and extend the fingers, special attention being given to the metacarpo-phalangeal joints, and during the operation the tendon sheaths, if undiseased, should as far as possible be preserved intact. As a rule an attempt has been made to preserve all undiseased periosteum. Such a step is strongly advocated by Ollier, who claims that the subperiosteal method brings about a stronger connection between the forearm and metacarpus and decreases the tendency to the establishment of a flail-joint. On the other hand, it should be remembered, that the periosteum is frequently much involved by the disease, and as the diseased parts must be removed it will be at best a tedious task to select and separate off the healthy parts from the bones; and what remains in scattered areas is likely to retard rather than hasten, and to interfere with the accurate approximation of the bones of the forearm and of the metacarpus which is brought about by the contraction of the surrounding soft parts and by the adaptation of the muscles and tendons to the decreased length of the limb segment.

The preliminary application of an Esmarch's bandage facilitates the operation, but when it is removed, free oozing of blood is likely to occur from small injured vessels and from any cut surfaces of bone. On this account adequate gauze drainage should be provided for at least twenty-four hours.

After the application of a copious absorbent dressing a retentive splint is applied to the part with the hand very slightly extended and the forearm flexed and in a semi-pronated position. Lister and Ollier devised special forms of splints for use in such cases, but an improvised, straight, and carefully padded anterior splint will answer very well. When first applied it may extend from just below the elbow to the finger tips, but after the first two days have passed, at which time movements of the fingers should be begun, it should be shortened so as to terminate just above the metacarpo-phalangeal joints, thus allowing the patient to move the fingers at will. Caution should be given to have this done frequently, not neglecting the thumb, and making the movement active in the metacarpo-phalangeal joints. To allow of the proper approximation of the ends of the bones the splint should be removed and readjusted every second day, the wrist being kept steady until the end of a week, when its passive movement should be undertaken and subsequently repeated with at least second day frequency until the chance of bony ankylosis ensuing is obviated, the ultimate aim being fibrous union and a movable joint. As

soon as sufficient strength and firmness is attained to prevent the hand assuming an abnormal position the splint may be dispensed with, and so long as the hand retains its normal attitude with relation to the forearm the wearing of a mechanical support would seem to be unneccessary. Gentle exercise should be encouraged, and electricity and massage may be employed with benefit. Attempts at opposition of the thumb to the fingers should be persistently insisted upon as well as all other movements of the fingers and the new joint, and likewise pronation and supination of the hand and forearm.

The operation may be followed by failure, the establishment of a flail-joint, complete ankylosis and immobility or fibrous union with mobility. Reasons for failure are obvious when consideration is given to the complicated nature of the joint and to the nature of, and the extent which may be attained by the disease for which it is most frequently performed, the outcome in tuberculous cases being often death from some other co-existing or subsequently developed tuberculous condition. A flail-joint is an undesirable result, but if the hand can be maintained in a normal position by means of a mechanical support the result is preferable to that of amputation. Likewise, complete ankylosis with immobility at the wrist and of the fingers is undesirable, but from an æsthetic point of view a useful hand is preserved. Fibrous union and mobility of the new joint is the result to be sought for and when this is attained with added free movement of the thumb and fingers, success is unqualified.

The advantages of a successful excision are too apparent to require mention and so it is that the operation ought to be persevered with, considering that the preservation of the hand is at stake and that even a hand much impaired in function is vastly superior to any mechanical device that can be substituted.

Following are some notes of a case of infective necrosis of the right wrist in which excision was successfully performed:

R—— W——, aged eleven years, referred by Dr. Taylor, of Inwood, Ont., consulted me on September 19th, 1904. Until ten months previous to consultation the patient was a healthy boy. At that time he had a needle run into the radial side of the palmar surface of his right wrist. The needle was withdrawn, but after two days the wrist became swollen and painful. The swelling soon extended up the forearm and arm, and constitutional symptoms of severe septic poisoning developed and persisted for a period of nearly three weeks, after which gradual subsidence took place. Suppuration occurred at the wrist, and an opening was made to evacuate the pus. Complete relief failed to ensue; the functions of the hand and wrist became much impaired, and during the ten months, at various times and

in various places around the joint, some seven or eight incisions were made for the purpose of evacuating pus.

On examination the patient's general condition was considered good. The right hand was firmly ankylosed in a flexed position at an angle of about 135° with the forearm, the fingers being extended and only allowing of a minimum amount of movement. Scars were present all around the joint, and on the palmar surface there was a large sinus, out of which the semilunar bone, much necrosed, had made its way on the previous day. The opening, which was about three eighths of an inch in diameter, presented excessive, unhealthy granulations and emerging from it was a purulent discharge. Pronation and supination could not be performed. From the history and the condition on

examination, the diagnosis was made of infective necrosis of the wrist.

Amputation seemed inevitable but as the general condition was good and there were no signs of acute disease, one suggested a stay of six weeks in hospital and decided to spend the first two or three in seeing what could be accomplished by excision, and, if neccessary, to amputate later.

On September 20th, I had him admitted to St. Michael's Hospital and performed the operation on the following day, Dr. Hodgins assisting, and Dr. Chambers administering the anæsthetic.

After an attempt to move the thumb and fingers, which was not very successful, and an Esmarch's bandage had been applied, the sinus was cleared out by curetting and disinfected with a solution of alphozone (1 in 1,000). A single metacarpo-dorso-

radial incision of about three inches in length was made, being so planned as to reach the interval between the extensor longus pollicis and the extensor indicis. The extensor tendons were so matted together with their sheaths and the periosteum that it was necessary to make a clean dissection of each and all of them. After this was done and the tendons drawn aside the exposed carpus presented the appearance of a diffusely necrosed mass. No attempt was made to preserve any of the periosteum. The posterior and lateral ligaments of the radio-carpal joint were divided, and after forcible flexion, the anterior one. Separation of the flexor tendons and the pisiform from the anterior surface of the carpus was then carried out, and after the ligaments of the inner four carpo-metacarpal joints were divided and the trapezium had been separated from the general mass, removal of this was effected by bone forceps, the knife severing any hitherto uncut fibrous bands.

On examining the articular surfaces of the radius and ulna they were found to be somewhat necrosed, so that it was necessary to remove about one quarter of an inch of their lower extremities. Their epiphyseal lines were apparently not encroached upon and the bases of the styloid processes were left. The metacarpal bases presented a normal appearance, likewise the trapezium, so that these were allowed to remain. The hook of the unciform had been removed with the mass, and the pisiform, which was diseased, was thoroughly curetted until only a shell of it remained. In this way the attachment to it of the flexor carpi ulnaris and the abductor minimi digiti were not definitely interfered with.

During the whole operation the only muscular attachments that were severed were those of the flexor brevis and opponens minimi digiti to the hook of the unciform, and, undoubtedly, such preservation contributed largely to the success of the operation.

After removal of the Esmarch's bandage considerable bleeding occurred. A few bleeding points were ligated and the cavity was firmly packed with iodoform gauze, the end of the strip being drawn through the sinus. The incision was closed by silkworm-gut sutures, an aseptic dressing was applied and the part maintained in a proper position by a well padded anterior splint.

On the first day after the operation the dressings were changed on account of saturation with blood. On the second day the gauze packing was removed, the splint was shortened so as to terminate just above the metacarpo-phalangeal joints, and passive movements of the thumb and fingers were commenced. The evening temperature was 101.6°, pulse 112. On the third day the evening temperature was 101.4°, pulse 112; on the fourth day 99.8°, pulse 98; the fifth day 100.4°, pulse

96; and on the sixth day 99.6°, pulse 100. On this latter day the sutures were removed, and there was a small discharge of pus from the centre of the wound. The cavity was syringed through with alphozone solution (1 in 1000), then lightly packed with iodoform gauze, and the dressing was reapplied. On the following day the temperature and pulse were normal. Scarcely any pus was present and the packing was dispensed with. On the ninth day the wound was quite free from pus, and passive movements at the wrist were begun. After this the splint and dressings were readjusted every second day, free movements being carried out at the time, and a gradual improvement being noticed in this respect. After October 16th the patient was allowed out of bed, a sling being used to support the hand and forearm.

At the end of four weeks the sinus on the palmar surface was quite closed, and when six weeks had passed the dorsal wound was also closed, and the wrist had attained sufficient firmness to allow one to dispense with the splint, although a bandage was worn for two weeks longer. On November 3rd he developed a sore throat, and on the following day the temperature rose to 105°, pulse 118. A bacteriological examination revealed the diphtheria bacillus, and he was removed to the Isolation Hospital. Constitutional symptoms rapidly disappeared but he was detained there until December 7th, when he returned to St. Michael's Hospital. Meanwhile movements were encouraged and gentle exercise of the part permitted.

When he was discharged, on December 20th, the bones of the forearm and of the metacarpus were closely approximated; the wrist was firm and of moderate strength. Shortening of the limb segment did not exceed one inch and a quarter. All movements were free, though somewhat limited. He could grasp a pen, and though with difficulty, could write legibly. He had become left-handed since the onset of the disease.

A later report, on February 11th, 1905, to which the patient signed his own name legibly with his right hand, shows that he "can pick up a stick of wood, use his knife and fork, dress and undress himself, button and unbutton his clothes handily, and use the pitch-fork, besides being able to do many other things," and that the hand is in a very satisfactory condition. Photographs taken on February 8th, 1905, indicate this very well.

The interesting points of the above case are the nature, obstinacy and extent of the disease for which excision was performed, the free dissection of the extensor tendons, the preservation of muscular attachments, the sacrifice of periosteum, and the decidedly favorable result of the operation.

To conclude, might not one hope for better results than heretofore in tuberculous disease of the wrist if the operation of excision were undertaken as soon as it becomes evident that improvement is not taking place under conservative treatment?

699 Spadina Ave., Toronto.

SOME LESSONS TO BE DERIVED FROM THE USE OF THE PELVIMETER DURING THE PUERPERIUM.*

By FREDERICK FENTON, M.D.

At the close of labor the fundus lies about midway between the pubes and umbilicus; in a few hours it will have risen to, or a little above, the umbilicus. As a rule by the tenth day after delivery it will have fallen to the level of the pubes. Sufficient attention is not given to the progress of involution.

Not many years ago all cases of diphtheria were isolated for four weeks and then the quarantine was raised, without any definite means being used to determine whether the patient

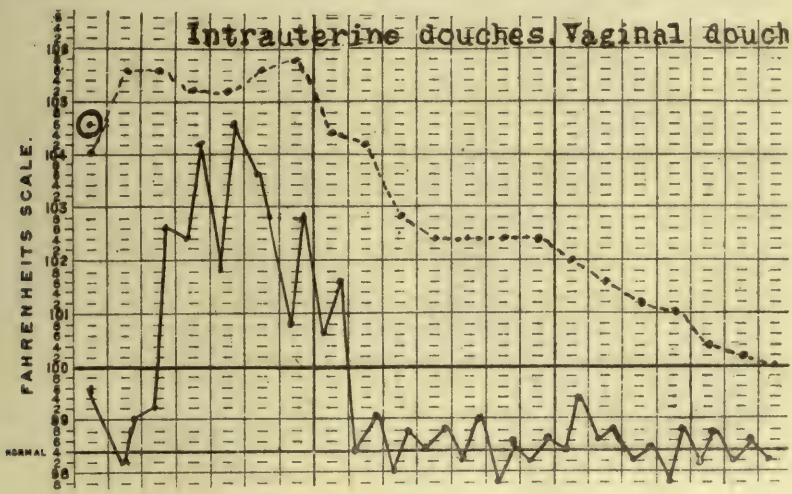


CHART NO. 1.

was free from the dreaded infection or not. We can recall instances where that rule proved disastrous to others.

Since the adoption of the bacteriological test as to the time of the raising of quarantine we have all seen patients released from quarantine in a less period than four weeks. Thus the arbitrary rule of a stated period did injustice at times in keeping some unfortunates in seclusion longer than was necessary, and on other occasions allowing those who were still dangerous to mingle with others to their detriment.

In obstetrical cases it has been customary to set a day on which patients shall be allowed out of bed, the particular day,

* Read before the Toronto Clinical Society, February 1st, 1905.

be it the tenth or the fourteenth, or even longer, depending upon the caprice of the medical attendant, and not upon a definite rule which will vary the time according to the condition and needs of each case. As in diphtheria, the arbitrary rule will do injustice to some at both ends of the line, by allowing one to get up too soon and occasionally retaining another in bed after she might safely be allowed to be about.

The pelvimeter should be to the obstetrician what the thermometer is to the physician. The ordinary length of a case of typhoid is three weeks, but the physician takes the first normal evening temperature as the mile-post from which he calculates certain things. The disappearance of the fundus uteri below

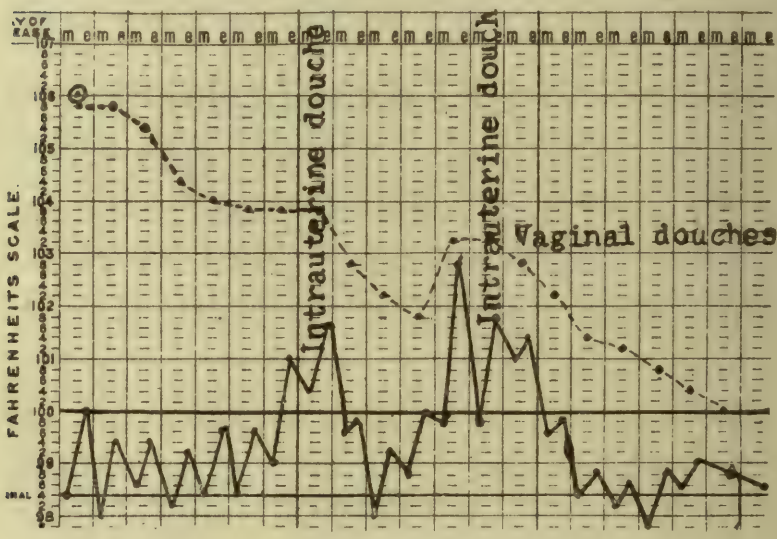


Chart No. 2.

the level of the symphysis should be the obstetrician's mile-post. We may hold varying opinions as to how far we should pass that mile-post, but, nevertheless, that marks the parting of the ways in a definite manner. My own rule is to allow my patients out of bed on the second day after that point has been reached, and not till then, be it the tenth or the twentieth day. But it is not only in normal cases that the pelvimeter is of service to us.

Of the various causes of delayed involution the most common and most serious is *sepsis of the endometrium.* Puerperal sepsis is always accompanied by a rise of temperature, and the first thought that comes to us when a puerperal woman has fever is the possibility of infection. In connection with cases

of this sort the pelvimeter is of the greatest service. If there be *sepsis of the endometrium* the fundus will first cease to fall, and if speedy relief be not afforded it will begin to rise higher than it had been. If, on the other hand, the fundus continues to fall, with rising temperature, one can make his mind easy as to the condition of the endometrium at any rate, and search elsewhere for the materies morbi. Another, and I believe, a very frequent cause of delayed involution is cervical laceration. The failure of the fundus to fall for three or four days, associated with a normal pulse and temperature, should lead one to investigate the condition of the cervix, when in most of such instances it will be found lacerated. It then rests with the

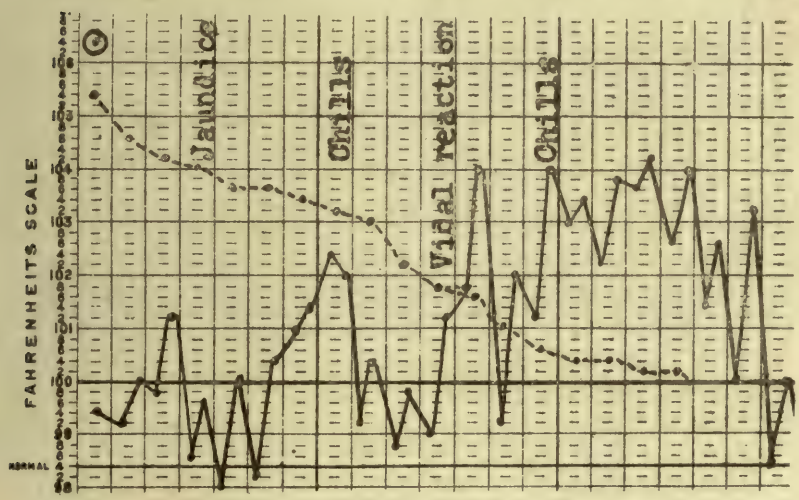


CHART NO. 3.

medical attendant to decide whether he will repair then or wait till a later date. Personally I have been very much pleased with the results I have obtained from the repair of cervical lacerations about five or six days or even as late as ten days after labor.

I have here five charts which I have selected to illustrate my remarks. Appended to each is a paper giving the salient points of the case. The first is that of a septic case, which demonstrates the rise of fundus with rise in temperature and its subsequent fall when the temperature fell. The second chart demonstrates the failure of fundus to fall during the early or incubative stage of sepsis, if I may call it such, the rapid dropping following a single intrauterine douche, a subsequent rise with a relapse of sepsis, and the final fall, with the improvement consequent upon the continuance of intrauterine

and vaginal disinfection. The third chart is one which illustrates the steady progress of involution, in spite of the fact that the temperature was progressively rising, by which I was led not to interfere with the uterus, but to await developments. The case proved to be one of typhoid fever. The fourth shows the satisfactory progress of involution after the repair of a

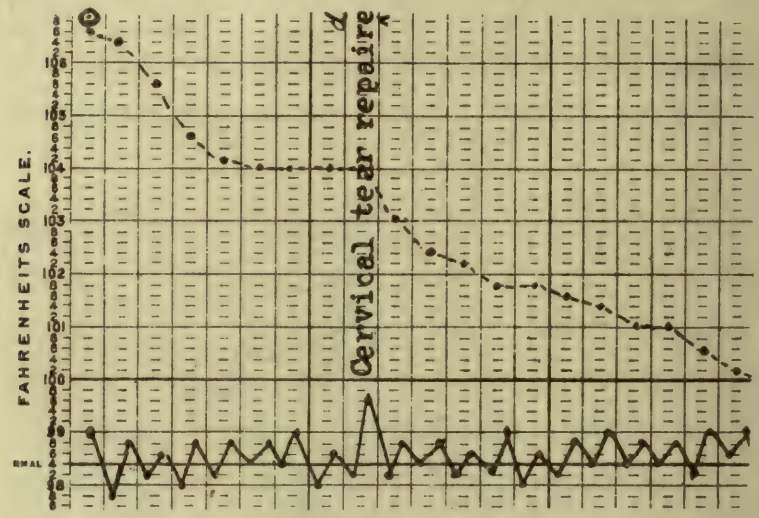


CHART NO. 4.

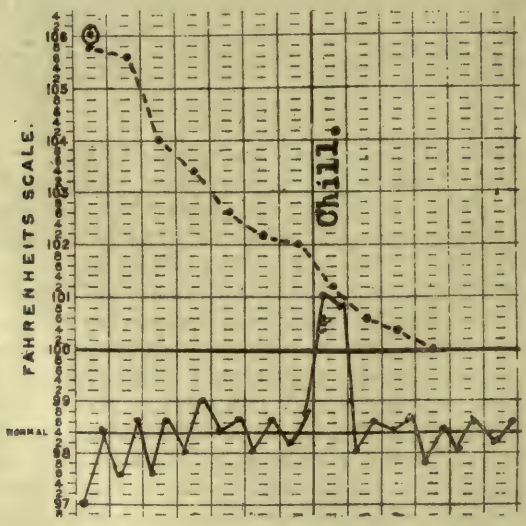


CHART NO. 5.

double cervical tear on the ninth day. The last one illustrates the non-interference with involution by the occurence of a severe chill on the eighth day, which was followed by a temperature of 101° and a pulse of 144 to the minute. No interference with uterus was undertaken, and subsequent history was uneventful. A painful breast was supported, an anodyne application applied, and a smart purge was given.

These illustrations might be multiplied to a very great extent, and much more might be said on the subject, but I am anxious to comply with the request of our President in such matters, and will be well repaid if I am successful in directing the attention to this matter of even a few who have heretofore given it little or no consideration.

INVOLUTION AND SUBINVOLUTION OF THE UTERUS.

By ADAM H. WRIGHT, M.D.

Dr. Fenton's paper is both interesting and valuable, and I quite agree with him that sufficient attention is not given to the progress of uterine involution after labor, but I think he was unfortunate in his choice of a title. "The use of the pelvimeter during the puerperium" is, to some extent, misleading, as there is no special virtue in the pelvimeter for the measurements he describes. The pelvimeter, as first invented by Baudelocque, consisted of a pair of calipers or compasses with legs sufficiently bent to measure the external conjugate diameter of the pelvis, or "Baudelocque's diameter." It, or one of its modifications, was soon used for all pelvic measurements. It is not required nor generally used, however, for measuring the height of the uterus above the symphysis. It has become the custom (and I do not object) to use it in the Burnside; but they used a flat 12-inch rule in the Queen Charlotte Hospital when I visited it four years ago, and I use, or have the nurse use, an ordinary tape measure in private practice, and find it more convenient than the pelvimeter.

I have paid considerable attention to the subject of involution and subinvolution of the puerperal uterus for many years, but especially since Herbert Spencer, of London, wrote on the subject about eight years ago, and after visiting Queen Charlotte Lying-in-Hospital in 1901, I introduced into the Toronto Burnside the daily record of the "involution line" in the ordinary chart. In doing this I copied largely the Queen

Charlotte's method, but modified the chart by placing on the right side a double column of figures in inches and centimeters.

I have found that the fundus descends more rapidly in the primipara than in the multipara, the difference being on an average one or two days in favor of the former. It reaches the top of the symphysis on the eighth day in 70 per cent. of primipara and only about 40 per cent. of multipara. It reaches the symphysis before or on the tenth day in the majority of multipara. In both primiparæ and multiparæ the time may vary from five to twelve days without any apparent abnormality.

My chief aim in referring to the subject is to sound a note of warning against some of Dr. Fenton's conclusions. In the first place, the involution line does not give us the same sort of precise evidence as to septic infection which bacteriological examination furnishes as to diphtheria. Ascent of the fundus does not always mean sepsis, nor does descent of the fundus always indicate the absence of sepsis. I shall not now give my reasons for these statements, my chief desire being to support Dr. Fenton in most of his contentions.

In considering a condition like puerperal infection, with such varying and numerous signs and symptoms, it is not well to pay too much attention to any one sign. Subinvolution is only one of many symptoms, and it is always important to study the patient in the broadest possible way.

I think that Dr. Fenton is scarcely fair to his confreres when he says that obstetricians generally "set a day on which patients shall be allowed out of bed, the particular day, be it the tenth or fourteenth, depending on the caprice of the medical attendant," without regard "to the condition and needs of each case." I think that most physicians whom I know consider carefully the condition of each puerperal patient. At the same time I quite agree that subinvolution of the uterus should receive serious consideration when examining and deciding as to the general condition.

I presume that in each of the charts the first day's marking indicates the highest position of the fundus on that day. In connection with the first chart I think that in such a case one cannot be certain that there was septic infection without bacteriological examination. Apart from that, however, I desire to point out tone important fact. When the fundus is found to be two or more centimeters higher on the second day without other symptoms, excepting pain or discomfort in lower abdomen, the cause is nearly always a distended bladder, and catheterization is indicated. But the nurse may say: "No, doctor, she has voided her urine regularly." At the same time the nurse will be surprised when she finds that the bladder contains more

than a quart of urine. One of the most valuable lessons I have learned from the involution line is the comparative frequency of retention of urine with overflow shortly after labor. I fear that this condition is often overlooked, and that as a consequence the puerpera frequently suffers unnecessary pain for days.

The second chart is interesting, but suggests certain questions as to intrauterine treatment which I have not now time to discuss, but I think that subinvolution alone should not, as a matter of routine, lead us to "interfere with the uterus." The other charts are interesting and instructive. I think the fourth is especially noteworthy, and I am glad Dr. Fenton has shown that cervical tear is an occasional cause of sub-involution, and performs immediate operation. I think he is quite right in both respects, and that such operation is generally quite satisfactory as to results. I presume that he refers especially to recent tears. It is likely, however, that he will agree with me in the statement that old tears are also occasional causes of subinvolution, and may be satisfactorily repaired during the puerperium.

REPORT OF A CASE OF OBSTRUCTION OF MAIN BRONCHUS BY A SHOE-BUTTON.*

By W. B. THISTLE, M.D., L.R.C.P. (Lond.),
Associate Professor of Clinical Medicine, University of Toronto.

The following report of a case of obstruction of the main bronchus on the left side by a foreign body, which proved to be a shoe button, seemed to me to be of sufficient interest to occupy the time of the society. The chief interest in the case lies in the remarkable and perplexing physical signs which the obstruction produced.

The patient, a little girl of about eight years, was admitted to the Children's Hospital under my care with what appeared to be a left basic pneumonia of the ordinary type. There was the history of acute invasion, with chill, and no history of accident of any kind. The temperature high, with increased respiration and pulse rate; very little cough and no expectoration. On examination of the chest, however, I at once came upon a condition somewhat unusual and difficult to explain—namely, that while there was the usual dullness over the lower part of the chest, with hyper-resonance in the chest above, yet there was complete absence of breath sounds over both the dull area below and the hyper-resonant area above. One frequently finds absence of breath sounds over the consolidated area in pneumonia; the vesicular murmur being absent because of the filling of the vesicles, and the bronchial sounds absent, because, we say, of the filling of the bronchus by the exudate. That this explanation of the quiet area in pneumonia is the correct one this case amply proves. How to account for the absence of breath sounds in the hyper-resonant area above the line of dullness was, however, more difficult. Some obstruction, which permitted air to enter, but did not allow of movement of air, seemed necessary. Examination over the dull area showed a few crackling rales. The child passed the next few days fairly well, about as one would expect in a child with basic pneumonia. After several days and no crisis or abatement of the symptoms, I examined very carefully for fluid in the pleura; especially, as after a few weeks the temperature became of the distinctly hectic type, and the child began to show the effects of prolonged fever, etc. She was becoming thin and pale with frequent sweats. The symptoms, with the exception of one important one, were exactly what one might expect in an empyema. Dullness, absence of breath sounds, diminished vocal fremitus and vocal resonance. The skodaic resonance above the line of

*Read at Clinical Society.

dullness still persisted, and there was still complete absence of breath sounds over that area. Careful examination showed absolutely no displacement of the heart. Because of the absence of this almost essential sign, together with the presence of occasional fine rales, I decided against fluid in the pleura. However, after another week, the same hectic fever, wasting and sweats continuing, I decided to test the matter by aspiration, in spite of the fact that the heart was in its normal position. The needle brought nothing. Again, after waiting perhaps a week, the irregular fever and sweats continuing, I used a larger needle with the same result. Later, the signs of the pus becoming so clear, although there was still no displacement of the heart, I felt that the case was becoming desperate, and acting on the idea that there might be an empyema, and for some reason no heart displacement, I had my colleague, Dr. Primrose, open into the chest. The pleura was absolutely free. The condition described still continuing in the lung, namely, dullness in the lower half, hyper-resonance in the upper part, and absence of breath sounds of any kind over the entire lung, I came to the conclusion that we had to deal with a pneumonic condition, probably tuberculous, and that probably an enlarged bronchial gland permitted air to enter the upper part, but prevented any considerable movement of air. Because of the absence of expectoration, an examination with reference to tubercle could not be made. The patient continued to have the daily rise in temperature with sweats and was much emaciated. About two months from the time she entered she had an unusually severe fit of coughing and brought up a large quantity of yellow pus, and with the first mouthful, an ordinary shoe-button somewhat corroded. At once there was a great change in the physical signs. Over the dull area at the base there was distinct bronchial breathing, and the breath sounds were loud and distinct over the resonant area in the upper half of the chest. From that time recovery was very rapid and in a short time the child was discharged well. The hectic temperature was explained, the purulent broncho-pneumonia producing symptoms quite like those due to empyema. The button, together with the purulent collection in the lower bronchi, prevented bronchial breathing being heard over the pneumonic area, but the obstruction permitted entrance of air to a slight extent in the upper part of the chest, filtering it, as it were, past the button; the movement of air, however, not being sufficient to produce the vesicular murmur. The immediate presence of bronchial breathing over the dull area upon removal of the button, proves the correctness of the explanation usually given for the absence of bronchial breathing over the consolidated lung, namely, that the bronchus is obstructed by exudate.

Clinical Note.

GUN-SHOT WOUND AND RESECTION OF KNEE-BONES NAILED TOGETHER.

By EVERETT S. HICKS, M.D.,
Port Dover Sanitorium.

J. M., aged 16.—On April 1st, 1904, the patient, while holding the barrel, pushed a shotgun into a brush heap. It went off, and at such close range completely riddled the right knee. The knee-cap was blown away and the joint laid completely open. A goodly amount of the surrounding skin was gone and the edges of the wound were lined by the synovial fringes. With loose bone and shot in the joint, and a plentiful supply of cloth and earth in the wound, it did not present a very favorable outlook. Under chloroform the leg was cleansed with green soap and antiseptics, and all except the immediate field of operation was enveloped in aseptic bandages. A resection was then done, the trochanters being removed high up, and a veneer taken off the tibia. In order to keep the bony surfaces together and to allow free handling of the limb, two three-inch wire nails were driven through the bones with a common hammer, all previously sterilized. They made the limb perfectly rigid. The skin around the large raw surface was drawn as closely as possible with mattress (continuous) sutures. The wound required dressing next day on account of oozing, but thereafter followed a perfectly normal course, no pus being present at any time. The first nail was removed in six weeks, and the other in nine weeks from the date of injury. They were tarnished but not rusted. On June 26th a plaster coat was applied so as to allow patient up on crutches. This was removed in six weeks, and the leg was strong and firm with very little shortening.

In such cases, when either are indicated, nails would appear to be as useful as the bone drills, since they give as good results and are easier of application.

Selected Article.

FILARIASIS IN MAN CURED BY REMOVAL OF THE ADULT WORMS IN AN OPERATION FOR LYMPH SCROTUM.*

By A. PRIMROSE, M.B., C.M. Edin., M.R.C.S. Eng.,
Professor of Anatomy and Associate Professor of Clinical Surgery in the University of Toronto.

Filariasis is very rarely met with in Canada; in fact, I am unable to find the record of a single instance in which filaria sanguinis hominis has been reported. In the case at present under consideration the patient had for many years been a resident at Barbadoes, and had contracted the disease whilst living there.

The pathogenesis of filariasis is well known, and we may sum up the historical record of our knowledge of filaria as follows:

The embryo filaria were first discovered in the fluid of chylous hydrocele by Demarquay in 1863. Lewis showed that the embryos had their normal habitat in the blood of a man in 1872. Bancroft found an adult worm in an abscess in a lymphatic gland in the arm in 1876, and later four others in a hydrocele of the spermatic cord. Manson, [1] who studied the disease in China, was the first to observe a periodicity in the occurrence of the embryos in the peripheral blood; his paper was read before the Pathological Society of London in 1881. As early as 1877 he had suspected the mosquito ([1], p. 291) as playing the part of the intermediary host, and of transmitting the infection to man. In 1879 he demonstrated the life history of the parasite in the body of the mosquito *Culex ciliaris*. Low, in 1900, observed and described the filaria lying in the proboscis of the mosquito. In 1901, Annett, Dutton, and Elliott, [2] whilst studying the disease on the West Coast of Africa, determined still more accurately the manner in which the mosquito parted with the parasite; they found that the filaria passed into the labium of the mosquito, and made its way from thence into the blood of man by rupture of a thin chitinous membrane on the upper surface of the labium. It would thus appear that infection is communicated to man by the bite of the mosquito. There is another possibility, though it is considered a remote one, namely, that drinking water may be contaminated by the dead bodies of mosquitos containing filaria, and thus infection of man may occur.

The victim of filarial infection does not necessarily suffer any inconvenience from the presence of the worm and the embryos; in fact it would appear to be the exception for pathological

*Read before the Canadian Medical Association at Montreal.

lesions to manifest themselves in persons thus infected. Annett, Dutton and Elliott[2] found in some localities of the West Coast of Africa as many as 50 per cent. of the inhabitants infected; it was exremely rare to find these individuals suffering any inconvenience whatever; seldom was any diseased condition manifested. Nevertheless filaria are capable of producing disease; this may be brought about by the adult worms blocking the lymphatics and thus interfering with the circulation of the lymph. Occasionally, too, parent worms may and in process of disintegration may produce local inflammatory trouble. Then, again, the embryo forms are, under certain conditions, responsible for disease. The normal embryonic filaria are apparently incapable of producing any pathological lesion whatever; they circulate freely in the blood and cause no disturbance of function, but immature ova have been shown by Manson to be a cause of trouble. Under certain conditions, probably in consequence of injury to the parent worm, immature ova are discharged in large numbers into the blood, and as a result pathological conditions subsequently manifest themselves. This is due to the fact that the immature ova cannot move as smoothly in the circulation; they are apt more particularly to block the finer lymph vessels, and then trouble ensues.

The filarial diseases which may thus be produced have been enumerated by Manson[3] as follows: Abscess, lymphangitis, varicose groin glands, varicose axillary glands, lymph scrotum, cutaneous and deep lymphatic varix, orchitis, chyluria, elephantiasis of the leg, scrotum, vulva, arm, mamma, and elsewhere, chylous dropsy of the tunica, vaginalis, chylous ascites, chylous diarrhea, and probably other forms of disease depending on obstruction or varicosity of the lymphatics or on the death of the parent filaria.

The patient whose history I now record suffered from elephantoid fever, lymph scrotum, lymphadenitis, and abscess with varicose groin glands. The details of the case are as follows:

J. W. W., aged 47 years, a native of Barbadoes, West Indies, came under my care in the Toronto General Hospital on December 18th, 1900, in order to get advice concerning a swelling of the scrotum.

History.—He had lived in Barbadoes all his life with the exception of six or eight short trips which he had made to Canada and Europe. He gave the following history:

In 1881, when he was 28 years of age, he suffered from what he believed to be hydrocele, for the treatment of which both sides of the scrotum were tapped and fluid drawn off, after which iodine was injected. This apparently effected a cure. With the exception of the hydrocele he enjoyed perfect health

and never had a serious illness of any kind until 1884, when on one occasion he became suddenly ill; an initial chill was followed by high fever and drowsiness. The chill was not repeated, but he was in bed for a week, the fever continuing, and there developed a painful swelling of the right leg below the knee; this gradually subsided and he fully recovered. He remained well for two years, when a similar attack occurred with exactly the same symptoms, but in addition, coincident with the occurrence of the chill, the glands in the right groin became swollen and tender. In subsequent attacks pain in the groin glands formed the first symptom and warned him of the approach of trouble. These attacks occurred at long intervals for the next few years; an interval of a year or eighteen months would pass without one. During an attack in 1891 an abscess developed in the calf of the right leg; this was opened and subsequently healed up without much trouble. At this date the scrotum first began to be affected and to swell up during the attack, and this became a feature of all subsequent seizures. At first the scrotal swelling would go down after the attack, but soon permanent thickening resulted. From October, 1899, until March, 1900, he had a series of successive attacks in Barbadoes; they were more severe than he had previously had. In all, seven attacks occurred during the six months mentioned. In one of them he had a severe rigor which lasted half an hour.

The patient never suffered an attack whilst in a cold climate, and hence during his visits to Northern Europe and Canada he has been free from the trouble altogether. A curious fact is that, in spite of the series of attacks such as I have described, filariasis had not been suspected, and he had never had his blood examined until he came under my care in Toronto. The history, too, would indicate that he had been a victim of the infection for sixteen, possibly for twenty years.

Condition on Admission.—The whole scrotum was greatly thickened. There was sufficient enlargement to form a heavy, somewhat flabby mass about three times the normal size. He supported the scrotum in a flannel bag when he walked about. The enlargement diminished slightly after he had been lying down for some time, but there always remained a considerable amount of permanent thickening. The tissues of the scrotum had a thick, indurated, leathery feel on manipulation, and there was some additional enlargement in the region of each testicle. On the right side there was a nodule about the size of an almond apparently in the epididymis. The condition about the testicles might have been due to the hydrocele from which the patient had suffered in 1881.

Examination of Blood.—On my first examination of the

patient I suspected that I had to deal with a case of lymph scrotum, probably of filarial origin. I stated my suspicions to Dr. J. H. Elliott, who happened to be in Toronto at the time. Dr. Elliott had just returned from the West Coast of Africa, where, whilst a member of the staff of the Malarial Expedition to Nigeria from the Liverpool School of Tropical Medicine, he had studied filariasis in man and in birds. He kindly undertook the examination of the blood, and subsequently succeeded in isolating the parent worm from the tissues which I excised at the operation. On the night of January 4th, 1901, Dr. Elliott drew some blood from the finger tip, and made three cover-glass preparations. In each of these he found the embryo filaria in large numbers. Thus under one cover-slip he counted twenty embryos. They were of a typical form, and and were readily recognized as filaria sanguinis hominis nocturna. In all instances the embryo was seen to possess a distinct case, such as is characteristic of the nocturna variety of filaria.

Operation.—I operated on January 5th, 1901. Chloroform was administered, and the greater part of the indurated scrotum was removed by an elliptical incision, the long axis of the ellipse running from before backwards, beginning in front at the base of the penis, and ending behind at the most posterior part of the scrotum in the middle line. Having excised this portion of indurated skin, there were left two lateral flaps of scrotal tissue just sufficient to cover the testicles. The operation was simple and presented no difficulties whatever. There was very little bleeding, and no ligatures were required. The edges of the wound were brought together by interrupted silkworm-gut and continuous horse-hair sutures. An antiseptic dressing was applied. The wound healed kindly by first intention, and the stitches were removed on the eighth day.

Examination of Specimen.—At the time of operation Dr. Elliott took charge of the scrotal tissue at the moment I removed it. He placed it in normal salt solution, and made a search for the parent filaria, teasing the tissue with a couple of needles. A number of fragments, apparently of an adult filaria, were floated off, but at first no complete worm. Then a small cyst-like body was observed on the surface; on opening which, a drop of serous fluid escaped, while in it was found an adult filaria. On placing this in a dish of salt solution its movements became very active, coiling and uncoiling itself with extreme rapidity; it looked like a piece of animated white thread, about six cm. long. If momentarily its movements ceased it would seem to be in an inextricable coil. Futher examination of the tissue failed to reveal any other adult worms. In the salt solution the adult filaria remained alive for some hours.

Observation of Periodicity.—In order to determine the periodicity of the appearance of the embryos in the peripheral blood a careful count was made every three hours, from noon on January 28th to noon of the next day. Dr. Coutts, who was then assistant in the Pathological Department, made the counts. A glass pipette was used, and each drop of blood for examination was carefully measured so as to obtain the same quantity of blood under each cover slip; the embryos under each were then counted. Four cover-slips were prepared for each count, and the number of embryos in each cubic centimetre of the blood was calculated from the results obtained.

Date.	Time.	Embryos per c.cm. of the Blood.
January 28th	3.10 p.m.	126
January 28th	6.10 p.m.	840
January 28th	9.10 p.m.	1,175
January 29th	12.10 a.m.	1,680
January 29th	3.10 a.m.	1,540
January 29th	6.10 a.m.	1,764
January 29th	9.10 a.m.	273
January 29th	12.10 p m.	0

After-History.—On February 19th, forty-six days after the operation, the patient suffered an attack of elephantoid fever. This was the first occasion on which he had experienced an attack of this nature in a cold climate. Immediately after lunch, in the middle of the day, he was seized with a chilly sensation, the skin became hot and dry, and he realized that he had what previously in the Barbadoes he had been in the habit of calling an attack of "ague." When I saw him at 5 p.m. his temperature was 104.4° F., respirations 32 per minute, and pulse 120. A tender swelling about the size of a hen's egg existed in the posterior triangle at the root of the neck on the right ride. The superficial tissues over this region were congested and edematous. He tells me that in the early afternoon when the attack first manifested itself he suffered severe pains in the back and limbs, with characteristic stretching and yawning, a feeling of lassitude and drowsiness such as he had always experienced in the tropics when an attack of this kind supervened. The local inflammatory condition subsided but recurred, and ten days after the onset of the attack the edema and tenderness made me suspect pus, and I incised the cervical swelling. I found a mass of sloughy-looking material, composed of greyish, edematous, broken-down glandular tissue. There was no pus formation. Careful search was made for parent worms, but none were found. The wound slowly healed

On March 13th, at midnight, and at 7 o'clock the next morning, a sample of blood was taken for the purpose of demonstrating the embryos to my class I was surprised to learn that no embryos were to be found, and none could be discovered on

subsequent occasions, although many attempts were made to secure a specimen. The following week Dr. Coutts made a systematic search for the embryos, proceeding in the same manner as he had done when making the counts for periodicity in January. The same quantities of blood drawn at similar hours were submitted to careful search. He succeeded in finding a single embryo in the blood drawn at 9.10 p.m. All the other samples were free from embryos; they had entirely disappeared. Subsequent to this, samples of blood taken at irregular intervals at night failed to discover any embryos.

It would therefore appear that not only had the patient got rid of his lymph scrotum, but the operation had resulted in freeing him of his filaria. The only possible explanation appeared to be that the filaria which Dr. Elliott found in the excised tissue were the parent worms, which were responsible for the production of the embryos in the blood, and that on their removal the embryos ceased to be produced, whilst those already in existence gradually disappeared, as, of course, they never come to maturity in the human blood, and must perish unless they are carried to an intermediate host.

My patient subsequently returned to the West Indies, where he at once adopted precautions to prevent reinfection, from the very first night sleeping under netting in order to keep the mosquitoes from him. He writes to me under date July 25th, 1901, to the effect that he had had his blood examined. He was fortunate enough to have the examination made (at the request of Dr. Phillips, the medical attendant), by Dr. G. C. Low, of the London School of Tropical Medicine, who happened to be in the locality at the time. Dr. Low pronounced him still free from filaria embryos. This examination was made six and a-half months after my operation on the scrotum when the parent worms were isolated. One may therefore conclude that a permanent cure had been effected by the removal of the parent worms from the scrotum.

Dr. J. H. Elliott's Description of the Adult Worms.

Dr. Elliott was good enough to make a careful study of the adult worms found. He reports as follows: Microscopic examination of the fragments found showed them to be apparently from a fully-developed female. The one perfect filaria proves on examination to be a female not fully mature. The length is 55 mm., and width 0.19 mm. (When mature the length of the filaria bancrofti varies from 88 to 155 mm. and the width 0.6 to 0.7 mm.) Both ends are tapered. The head end is slightly bulbous, measuring 0.052 mm. at its greatest diameter. The neck at its narrowest point has a diameter of 0.045 mm.

The tail end tapers until it reaches a diameter of 0.044 mm., and then is abruptly rounded. The cuticle shows transverse striations, especially near the ends. The buccal orifice is centrally situated at the anterior end. The first part of the alimentary canal is thick-walled and muscular, but throughout the greater part of its length the walls are thin. The posterior opening is lateral, the anal orifice being marked by a slight depression 0.028 mm. from the end. What appears to be the nerve collar crosses the osophagus 0.195 mm. from the anterior

Fig. 1.—Anterior end × 60. A. Oral aperture. B. Nerve ring. C. Oesophagus. D. Vulva.

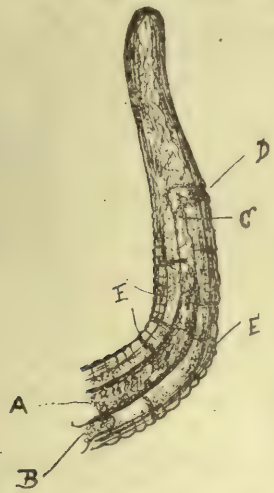
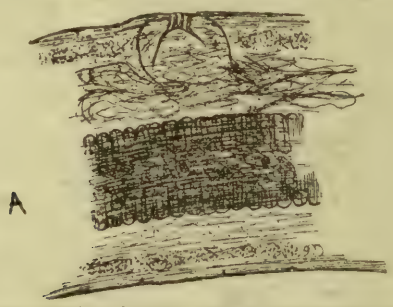


Fig. 2.—Posterior end × 90. A. Alimentary canal. B. Posterior horn of uterus. C. Cloaca. D. Anal orifice. E. Cuticular striations.

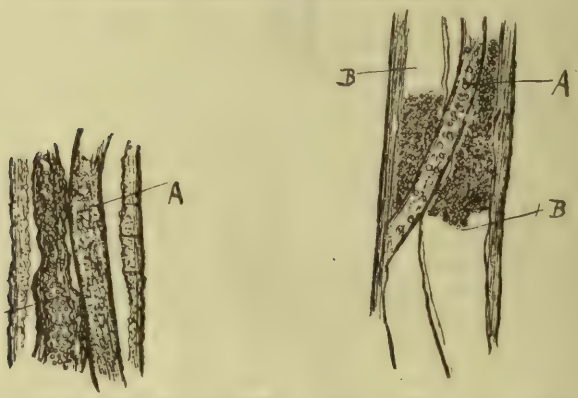
end. The vaginal orifice is situated at a distance of 0.67 mm. from the anterior end, being marked by a depression surrounded by a slightly-raised papilla. The width of the worm at the vulva is 0.125 mm. The vagina, which possesses thick muscular walls, extends backwards 3.45 mm., where it receives the two horns of the uterus. Only a small number of ova are present in the vagina, but the uterine horns are completely packed with them. The uterine walls are thin. The two horns make

several turns about one another and the gut as they pass backwards to the posterior end. The gut has a constant diameter of 0.0347 mm. The rest of the celomic cavity is taken up by the distended uterus. The uterus terminates blindly about 1.2. mm. from the tail.

Cobb's formula, [4] which was used extensively by the malaria exedition to Nigeria ([2], p. 23), was devised so as to indicate the measurements of different parts of nematode worms as



Fig, 3.—Region of vulva × 270. A. Alimentary canal.



-A point 3.48 mm. from head Fig. 5.—Near middle of the worm × 90. A. Alimentary canal. × 90. A. Alimentary canal. B. The iscular walls of vagina. two horns of uterus.

percentages of the whole length of the body. Reduced to Cobb's formula the size of the parent worm in this case was as follows:

—0.36	3.64?	1.22	99.5
—0.145	0.327?	0.254	0.147

Measurements for specimens of filaria bancrofti do not appear to have been previous published. They could not be obtained for the work on *Filariasis* issued by the Malaria Expedition to Nigeria ([2], p. 44).

Commentary.

The attack of lymphadenitis in the neck with the characteristic symptoms of the elephantoid fever, which came on forty-six days after my operation, might be accounted for by supposing that immature ova had been discharged into the circulation by the parent worms during the manipulations at the time of operation. The immature ova as has already been pointed out, are considered by Manson to be a frequent cause of trouble in the individuals suffering from filariasis. In my case, it might be presumed, they brought about a lymph stasis in the cervical region, with the sequel of events described. This was the only attack of elephantoid fever suffered by my patient in a cold climate, and I think the observation is one of considerable interest. With this single exception he enjoyed complete immunity from such attacks whilst visiting Canada and Northern Europe; and it must be admitted that the single instance referred to occurred under very exceptional circumstances, directly traceable, no doubt, to the operation. The general observation might therefore be made, if we conclude as much from the evidence here presented, that an individual, the subject of filarial infection, gets complete relief from attacks of elephantoid fever when he migrates from the tropics and takes up his abode in a cold climate. Immunity from such attacks was enjoyed, although, as examination showed, the embryos continued to circulate in his blood. The truth of this fact was not deduced from a single experience, but was proved repeatedly by my patient, who on many occasions sought and found relief from the frequent attacks which he suffered in the tropics by visiting a cold climate.

Many interesting observations have been made regarding the occurrence of the embryos in the peripheral blood. Manson[5] has determined by observations conducted *post mortem* on a man who committed suicide, and who had been a victim of filarial infection, that when the embryos are absent from the peripheral circulation they find shelter in the larger blood vessels, particularly the arteries, the majority being found in the vessels of the lung. Manson calls attention to the analogy which exists between filarial periodicity and that of the malarial parasite, "the two parasites of man subserved by the mosquito." In 1882 Stephen Mackenzie[6] reported a case of hematochyluria of filarial origin in the person of a private in the Royal Artillery who had come from India, and was admitted to the London Hospital. Mackenzie reversed the patient's usual hours of movement and rest, his meal times being correspondingly altered. The effect was a complete inversion of the filarial migration. The embryos were now found in large numbers

during the daytime, and were absent during the night. On resuming his usual habits the nocturnal periodicity returned as before. No reasonable explanation of this is forthcoming.

In tropical countries it is not uncommon to find a type of filarial infection in which the embryos are only found in the peripheral blood in the daytime in individuals of ordinary habits of sleep, etc. In the case of this parasite known as the filaria diurna the periodicity is therefore the reverse of that described in my case. No marked pathological lesions have been encountered in connection with this parasite, and this circumstance, as Annett, Dutton, and Elliott ([2], p. 53) point out, accounts for the fact that their geographical distribution has not been made out with accuracy. No difference can be detected in the embryonic form, between filaria nocturna and filaria diurna, and according to Annett, Dutton, and Elliott ([2], p. 92), "the weight of evidence is on the side of identity" of these two forms. If they are identical, then, for some unknown reason, there must be a reversal of the periodicity comparable to that established experimentally by Mackenzie. The parent form of filaria diurna has not been discovered. Manson suggested the possibility of filaria loa being the worm in question. This worm (filaria loa) is from 16 to 70 mm. in length ([2] p. 50); it inhabits the connective tissues, and has frequently been observed moving about under the conjunctiva or under the thin skin of the eyelids. It moves about in such localities with marvellous rapidity. Two specimens of this worm have been obtained to my knowledge in Toronto, in both cases removed from the eyelids of individuals who had returned to Canada from the tropics. One case was reported by Dr. Frederick Fenton,[7] the other occurred in the practice of Dr. F. N. G. Starr. Unfortunately in neither case was the blood examined for embryos, as the suggestion regarding filaria diurna and its possible relationship to filaria loa had not been made, and there was no reason to suspect the presence of parasites in the blood.

There are some forms of filarial infection in which no periodicity whatever occurs. For example, the filarial perstans, which is very common on the West Coast of Africa, embryos in small numbers are found in the peripheral blood at all hours of the day and night. The embryonic form of filaria perstans is very different from filaria diurna or filaria nocturna. It is much smaller than either of these, and differs markedly from them also by possessing no sheath.

Occasionally an individual may be the victim of filarial infection, and may present evidence of extensive lesions produced thereby without at any time showing filarial embryos in the peripheral circulation. This can only be explained on the

hypothesis that the lymphatic channel has been so blocked that the embryos are unable to find their way to the blood stream. Thus Strube, in the *Deutsche medicinische Wochenschrift*[9] describes five such cases from Natal and the Transvaal, where filarial embryos were found in the urine, but none were present in the blood, which was carefully examined during the day and night. Lothrop and Pratt ([10], p. 284) cite this paper in support of the statement that embryo filaria had been found in the blood of the negroes of the Transvaal. As a fact, however, the blood was free from embryos in Strube's cases.

Manson[8] asserts his belief that before embryos can be found in the blood by ordinary microscopic examination large numbers of parent worms must be present in the lymphatics. Annett, Dutton, and Elliot ([2], p. 67) were led to believe from their investigations that Manson's conclusions were not justifiable. The case which I now place on record would seem to have a direct bearing on the question, and would go to show that very few parent worms may be responsible for a large number of embryos in the peripheral circulation. Lothrop and Pratt,[10] of Boston, report two cases of filariasis observed in that city, in one of which operation was performed for lymphatic varices and chylous hydrocele, with the removal of adult worms. In all nine worms were removed, of which two were males. There was, however, in their case no subsequent disappearance of the embryos from the blood ; they were found present six months after operation. In their paper, which was published in 1900, they had collected 11 cases from the literature, in which adult filaria bancrofti have been found, and, as far as they were able to ascertain, the adult worms had never before been found in the United States. I can find no case on record of a cure being effected by removal of the adult worms such as I now report. Manson ([3], p. 505) states that the disappearance of filarial embryos from the blood which sometimes occurs in cases of lymphatic varix of long standing is, doubtless, due to the death of the parent parasites, but there is no suggestion that such a result may be brought about by operation.

The interference with the lymph circulation is often very great in these cases, and those who have had much experience in operating state that there is danger in attempting to excise affected tissues, lest in so doing the anastomotic circulation of the lymph may be interfered with to such an extent that matters may be made worse rather than betterr. Godlee[11] has quite recently, on the suggestion of Manson, operated with the view of producing an anastomosis between one of the dilated lymphatic vessels and a tributary of the internal saphenous vein. Subsequently, another lymphatic had been introduced into the spermatic vein. The result had been extremely successful.

Apart from the presence of embryos the blood has exhibited other peculiarities in infected individuals. Gulland[12] has shown that there is a distinct osinophilia observable when the embryos are present in the peripheral circulation. This, Gulland observes, brings filariasis into line with other parasitic infections—for example, ascaris, oxyuris, ankylostoma, tenia, and trichina, in all of which osinophilia exists. This, it is asserted, goes to show that the osinophiles are concerned in protecting the body from the toxins of the parasites. Coles[13] has confirmed Gulland's observations and has found osinophilia in bilharzia disease also. Calvert[14] made somewhat similar observations among Filipino prisoners at Manilla, but he was of opinion that the osinophilia was only characteristic of the early stages of filariasis, and that as the disease progressed the leucocytosis and increase in osinophiles gradually decreased.

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Progress of Medical Science.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Treatment of Fracture of the Patella.

At the Clinical Society of the New York Polyclinic Medical School Dr. Walter C. Gilday read a paper on the Treatment of Fracture of the Patella. The following *rèsumè* gives the main points:—"Treatment of recent fracture of the patella should be divided into non-operative and operative. The non-operative, in my opinion, is not the treatment of selection, but should be resorted to when the patient will not allow an operation. When we meet such individuals I prefer the method of Wyeth, which consists of two pieces of adhesive plaster cut in such a shape that they cover the entire anterior surfaces of the thigh and leg. At one end of one piece is left a narrow strip, to which is attached an ordinary buckle; on the other one the strip acts as a tongue that fits into the buckle. The thigh and leg having been scrubbed and shaved, the adhesive plaster is so applied that the upper and lower fragments of the fractured bone are caught respectively by the tongue and buckle. The buckle is tightened so as to draw the fragments together. They usually show a tendency to tilt upwards, which is overcome by placing a piece of cotton directly over the fracture, the counter-pressure holding the fragments in opposition.

Union is not bony, as the torn capsule will drop between the broken ends of the bone. A posterior splint is applied, and in a very few days the patient is allowed to go about with crutches, the sole of the shoe on the opposite foot being elevated. The buckle is tightened as the swelling goes down.

The treatment is kept up sometimes for months, and the result is not as satisfactory as after the open operation. The patient will complain that it bothers him to go down stairs, or to run, and will say that he is never "sure of his leg."

The best time to operate is the third or fourth day after injury, the patient having previously been kept perfectly quiet, with a posterior splint and an ice-bag applied continuously over the knee-joint. By this time hemorrhage will have ceased and the swelling subsided. If, however, the swelling has not sufficiently reduced itself, it is perfectly safe and proper to wait until the seventh or eighth day.

The asepsis is all-important, for the existing contused and lacerated soft parts, in the presence of blood clots and serum, present a fertile field for sepsis. On the other hand, there are several days during which to prepare the skin. This may be accomplished by applying, during the first day, a thin green soap poultice over the entire knee-joint, under the ice-bag; the next day scrub thoroughly two or three times with a brush and green soap; then an application of 1-5000 bichloride dressing is kept on till the time of operation. Tincture of iodine is applied to the skin immediately preceding the incision. The operator should so perfect his technique that his fingers never come in contact with the field of operation.

A few minims of a one-fourth of one per cent. of cocaine solution injected into the line of incision will completely anesthetize the whole field, and is preferable to general anesthesia. The cocaine solution must have a neutral reaction, which is accomplished by using normal salt solution as a medium.

I prefer the semi-lunar incision, with the convexity downward. The most serious objection to this incision is that the scar comes over the tubercle of the tibia, which can be obviated by bringing the incision a little above this pont.

The incision being made, intervening blood clots are washed out with a stream of normal salt solution, the torn edges of the aponeurosis are picked up with a thumb forceps, the ragged edges trimmed off with a pair of scissors and sutured, care being taken to get perfect apposition, especially of the lateral aspects. Kangaroo tendon is the preferable suture material. The wound is dressed with an ordinary dry aseptic dressing, and a posterior splint applied. In the clinic of Prof. Bodin, an individual splint is used for each case. The splint is made of plaster of Paris, folded in the shape of a board, and before it hardens, applied to the posterior surface of the leg and firmly bound. The skin is first coated with a thin layer of vaseline, and the plaster applied directly to it, and excoriation has never resulted from this method. Plaster, after hardening, is removed, the rough edges are cut away and trimmed with adhesive plaster."

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. McILWRAITH, FRED. FENTON AND HELEN MacMURCHY.

On Uterine Hemorrhage and Their Treatment.

Professor Jul. V. Elischer, physician of St. Rochus Hospital, Budapest, in an article on the treatment of Uterine Homorrhages, says that in his clinic he has thoroughly tested the new uterine hemostatic styptol. The special diseases coming under observation were hemorrhage of the genitalia without any pathologico-anatomical substratum, and further such cases in anemia, endometritis, glandularis diffusa, metritis chronica, with or without subinvolutio uteri, retroflexio uteri, climacterium, and finally tumor of the uterus. Twenty-four cases were described in detail. The effect of styptol is compared with those of the usual hemostatica in genecology,—hydrastis, ergotin and stypticin. Hydrastis is helpful up to a certain point, but in many cases it seriously diminishes the appetite and causes tormenting stomach troubles and retching, whilst sometimes the effect fails. Ergotin produced with one patient, even with small doses, feelings of anxiety every time; stypticin certainly generally held the hemorrhage in check, but had no influence in preventing a quick return of the bleeding nor upon the pains occurring; in two cases it produced, in addition, strong nervous excitement, and also quite failed in its proper effect. Styptol without a doubt yielded the best results in doses of .05 every three hours or a tablet three times daily. Unpleasant secondary results never occurred, and the sedative effect was always strongly pronounced. It is interesting to observe that styptol exerts a sedative influence on the extensive vascular system of the sympathetic nerves, because then styptol should thus be not merely a symptomatic remedy, but should operate on the causa morbi in many cases of hemorrhage without pathologico-anatomical changes. In addition styptol diminishes the morbid secretion and hinders the thrombus formations.—*Wiener Med. Wochenschrift*, 1904.

The Serum Treatment of Puerperal Fever.

E. Bumm finds that the introduction of antisepsis has done less for the puerperal condition than for all other forms of wound infection. This does not apply to lying-in hospitals, which used to be hotbeds for puerperal infection, but to the large mass of confinements in private houses (*Berl. klin. Woch.*, October 31st, 1904). He believes that this failure on the part of antisepsis is not so much due to the limited understanding

of midwives as to the enormous difficulty in carrying out a sufficient disinfection in a private house, especially of the poorer classes, and in the unfavorable conditions of the birth itself. A birth occupies many hours and the wounds are not like those of an operation. Coming to the conclusion that there is but little chance that the incidence of puerperal fever in private houses and in cases of midwives' attendance will be much further reduced, he turns his attention to the best methods of dealing with the infection when it has occurred. Local disinfection has proved a failure, save in cases of retention of putrifying portions of placenta, blood clots, etc. Curetting and the recently introduced (French) idea of *ecouvillonage* —brushing out the cavity with a sort of bottle brush—are only dangerous and do not do more than the older antiseptic washing out. When streptococci have gained a foothold these means must fail to drive them out. The general treatment by means of plentiful nutrient food and alcohol only do temperary good, and do not really save any patients. It is, therefore, very desirable to possess a specific means of treating puerperal fever. The introduction of the antistreptococcic serum has so far led to very different opinions. Glowing accounts of its life-saving properties appear in the shape of accounts of single cases, while the trials given in clinics on large numbers of cases have not led to encouraging results. It is, however, not at all easy to decide what the real value of the serum treatment is. In spite of this difficulty and of all the deficiencies of the treatment, Bumm has employed it during the last ten years, and the bare fact that the animal experiments yield such distinct proof of its activity, impel him always to resort to this form of treatment. He has employed every variety of antistreptococcic serum, but now practically only uses Aronson's serum. His results are given as follows: In five cases of general septic peritonitis, starting from a septic (streptococcic) endometritis, as well as in four cases of operation peritonitis, all cases failed. Of three cases of pure septicemia, from streptococcic endometritis, with streptococci in every blood specimen taken, two ended fatally, while one recovered. In this case the temperature fell from 41.5° to 37.5° after the first injection, and, having risen to 40°, it fell again to 37° after the second injection. Shortly after this a localization of the process was found to have taken place. In two cases of septicemia with endocarditis, the serum failed. Four patients died of pure pyemia in spite of serum, starting from septic thrombophlebitis. The serum was not employed in those cases of parametritis and pulveoperitonitis, accompanied by septic salpingo-oöphoritis, as the appearance of a circumscribed tumor rendered the prognosis favorable without. In fifty-three cases the serum was begun

early, while there was only some septic endometritis present. In each case the streptococci were detected microscopically. It was not possible to determine any spread of the infection beyond the uterine mucous membrane by clinical examination at the time of the beginning of the treatment. Six of these patients died—one of peritonitis, one of pyemia, and four of septicopyemia. Of these fifty-three patients he deducts twenty-one whose symptoms were evidently mild; the remaining thirty-two were undoubtedly severe cases. In seventeen, streptococci were found in the blood, and he therefore feels justified in being highly satisfied that twenty-six of these women recovered. His belief of the efficacy of the serum is partly based on the observation which he has so frequently made that the temperature nearly always falls in response to the injection, even in cases which end fatally, and, secondly, because he has found twelve hours after the injection a distinct phagocytosis appears. He regards the rapid appearance of leucocytes containing streptococci as very direct evidence. He warns one to be extremely careful in applying the serum intravenously, but states that he regards the subcutaneous injection as quite safe. He believes that one is justified in giving a prophylactic injection immediately after difficult deliveries, especially after manual detachment of the placenta and decomposition of the "waters."—*British Medical Journal.*

TRANSACTIONS OF THE EDINBURGH OBSTETRICAL SOCIETY.

The twenty-ninth volume of these transactions is to hand and as usual, it contains many interesting papers and discussions.

Vaginal Caesarean Section.

Dr. Munro Kerr, of Glasgow, contributes a paper on "Vaginal Cæsarean Section." He first distinguishes this operation from "the deep incisions which one makes to hasten delivery in cases of eclampsia, rigidity of the cervix, etc., when the cervix has become obliterated"; and it transpires, in the course of the paper, that these incisions cannot always be made sufficiently extensive to permit delivery. The operation consists in "separating the bladder from the anterior uterine wall, possibly the peritoneum from the posterior uterine wall, and splitting the cervix anteriorly; and, if necessary, posteriorly right into the uterine cavity." Not only that, but if need be, extensive vaginal incisions are made. The indications are: "When the

cervix is too rigid to dilate, and when the uterus must be emptied at once. . . . The great place for it is likely to be in accidental hemorrhage." Dr. Kerr states that the operation took him about four minutes to perform, that the after-stitching was not difficult, and that the bladder strips up easily in the puerperal uterus. In a subsequent paper Sir Halliday Croom states that the dangers of the operation are sepsis and hemorrhage, and that, notwithstanding Kerr's statement to the contrary, the after-stitching is difficult. The advantages which Dr. Kerr claims for this operation are:

1. It is sometimes the only method of rapidly emptying the uterus.

2. Absence of the shock which is apt to accompany forcible dilatation.

3. A clean cut instead of a tear to deal with.

Dr. Kerr is familiar with the use of Bossi's dilator, and it is evident that there are some cases in which he is afraid to use it for fear of producing lacerations. With regard to its use in accidental hemorrhage, we venture to point out that the hemorrhage which succeeds delivery in these cases is not always from a lacerated cervix, but as in a case reported the same evening by Dr. Ballantyne, from the inability to get the uterus to contract. This it is which has lead some obstetricians to propose Porro-Cæsarean section as the only means of controlling the hemorrhage in this dangerous condition. We cannot see that vaginal Cæsarean section overcomes this difficulty.

Thyroid Extract in Eclampsia.

Dr. Oliphant Nicholson, of Edinburgh, gives the history of another patient treated with thyroid extract. Pulse tracings are given showing the effects of thyroidism in reducing pulse tension. Sufficient evidence has been produced to show that this agent is a powerful vaso-dilator and diuretic, and as such it may well be given a place in the treatment of eclampsia and the pre-eclamptic state. Upon Dr. Nicholson's other hypothesis, that it may have a specific action on this disease as well, we must pass the Scotch verdict, "Not proven."

Bossi's Dilator.

Dr. J. W. Ballantyne gives an account of eight cases in which he used Bossi's dilator. We cannot see that the results attained were better than the results attained by Harris's method of manual dilatation; and in the majority of the cases it does not appear from the account given that this method was inapplicable. One advantage always claimed for Bossi's instrument is that it can be more efficiently sterilized than the fingers; but Dr. Ballantyne tells us that it is difficult to keep the dilator

perfectly clean. Munro Kerr, in speaking of this instrument, gives his conclusions about it as follows:

1. When the cervix is obliterated and the os will admit the finger without difficulty, dilatation can be carried out in about twenty-five minutes, and there will be little or no laceration.

2. In cases where the pregnancy has advanced to or near term, even although the cervix is not obliterated, dilatation may be accomplished with comparative safety to the cervix, provided care, time and patience are expended on the operation.

3. In cases where the pregnancy is not far advanced great caution must be exercised in using the instrument, and in spite of the greatest care there will often be lacerations.

These conclusions are admirably clear. We think, however, that precisely the same claims may be made for Harris's method of manual dilatation, with this in addition, that the fingers are much more sensitive to detect a commencing laceration than their metal rivals. Bossi's or any other metal dilator can, of course, be passed through the cervix before the finger and thumb tip can, and this seems to us their one advantage.

Obstructed Labor.

Perhaps the most interesting paper in the volume is one by Dr. Jardine, of Glasgow, the title of which is, "Clinical Notes of a series of twenty-two cases of Obstructed Labors, including eight cases of Induction of Labor, four cases of Symphyseotomy, and ten cases of Cæsarean Section."

The author says further: "During the past year my colleagues and I have treated 703 cases in the Glasgow Maternity Hospital, and in this number we have had to deal with ninety-eight cases of contracted pelvis. This is certainly an extraordinary proportion, viz., about one in seven, and it does not by any means include all, but only those in which there was difficulty in delivery. The slighter forms, where delivery was effected by nature, are not counted." Furthermore, "cases 2, 5 and 6 of Cæsarean section, were all operated on within fourteen hours." Again, "There are at least six cases waiting for section within the next three months." Truly, these Glasgow obstetricians lead a strenuous life!

In his remarks on "Induction of Labor," Dr. Jardine says: "The cases suitable for induction are practically the same as those for symphisiotomy. . . . The great point to decide the matter is the size of the head relative to the pelvis, provided that the child has reached an age at which it will have a good chance of surviving. . . . To give the child a reasonable chance the thirty-second week should have been reached. The nearer full term the better. If the head will not pass the brim at the thirty-second week, I think one should decide upon an

operation at full term, preferably Cæsarean section. On the other hand, if the head can be easily pushed into the pelvis we should wait, seeing the patient week by week, until the time comes when the head enters the brim with difficulty. Labor should then be induced without delay."

He does not think that the operation of symphysiotomy will ever become a favorite one in Britain. There is much unavoidable laceration of the soft parts, great difficulty in nursing, and a long convalescence.

Many interesting gynecological papers are also included. Dr. Scott Carmichael's on "Leucocytosis in Pelvic Disease in the Female," will be of value to the obstetrician who finds it difficult to determine whether a temperature in the puerperium is due to a generalized septicemia or to a localized collection of pus.

In conclusion, we should wish to add our voice to the general expression of regret at the death of Dr. Milne Murray. He will be greatly missed on this side of the Atlantic as well as in his own land. K. C. M.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN, M.B., M.D.C.M.

The Removal of Foreign Bodies from the Eyeball and Inner Surfaces of the Lids.

Dr. Mark Stevenson (*Therapeutic Gazette*) has a carefully written article on this subject. But little has been written about the removal of the usual foreign bodies or substances, viz., sand, emery, lime, scales of iron, etc., which so frequently find lodgment on the inner surface of the lids or outer coats of the eyeball. These accidents to the eye are of very frequent occurrence; hence not only the trained specialist, but also the general practitioner, and even a fellow employee or layman, is called upon to give relief. It is of the greatest importance in many cases to be able to act quickly and wisely.

No doubt there is more blindness and more distress caused in the aggregate by these so-called simple cases than by the penetration of foreign substances into the eyeball, about which we read so much. They should be removed as soon as possible, for if in the cornea, an inflammatory infiltration will soon form about them in the shape of a gray ring. Later the tissues in this place will break down, the particle falls out, and healing takes place in favorable cases, a fine scar only marking its loca-

tion; but an infective ulcer, a severe inflammation, or an iritis may follow, and the worst result—such as loss of the eye. Particles of powder and lime are the only substances that may remain in these tissues without exciting suppuration, by becoming permanently incorporated in them.

It is proper to first get a short history of the accident, when and how it occurred, the nature of the foreign substance, if possible, and where it seems to be lodged at the time of the examination. If it is not lime or some caustic alkali or acid (see later), it is well to instil two or three drops of a 4-per-cent cocaine or 1-per-cent holocaine solution, a minute apart.

First draw down the lower lid so as to expose its inner surface. A condensing lens of about a three-inch focus should be used to throw a strong light on the part of the eye examined. If anything is seen, it can usually be removed by some moistened cotton wrapped on the end of a probe or toothpick. If it is not here, separate both lids, and carefully examine the cornea and bulbar conjunctiva. Light must be focused on the cornea by the lens, which is moved about, so as to illuminate the different areas in turn. A binocular magnifier or loop is of great service in aiding the examiner's eye to detect small particles.

Frequently an eye will have to be examined, the cornea, of which has been already picked, scraped, or otherwise mutilated in previous attempts at removal. The epithelium is often rolled up in little curls, and may be readily mistaken for some foreign substance. Sometimes, also, the substance is enclosed in or behind rolls of this epithelium and greatly hidden from view, so that the most painstaking care must be used to detect and remove it, as a slender wavering tag of epithelium must often be removed at the same time.

A very excellent method, where no foreign body can be detected in the remaining part of the eye sac, is to instil one drop of a 1-per-cent fluorescein solution. If an ulcer, abrasion, or an erosion of the cornea be present, it will immediately stain a light green. In the stained area the foreign body is likely to be found. If it is not easily removed by a swab of cotton, it is well to lay the patient on a lounge or table in good light, with the head slightly raised.

Besides the use of the two or three drops of cocaine or holocaine solutions already instilled, it is well to apply a small amount of the solution to the exact spot, by means of cotton wrapped on the end of a probe, for half a minute or longer. In this way local anesthesia is best obtained. To remove the foreign body, two kinds of spuds are useful, one with a blunt, the other with a sharp-pointed end. With the former, substances can often be removed by short scraping movements, and with the latter are literally dug out.

As little of the surrounding normal tissue should be disturbed as possible, for the larger the denuded surface the longer the repair.

After the particle has been removed and the eye sac cleansed by a sterile or weak antiseptic solution, if there is much congestion of the conjunctival vessels, cold applications (cloths wrung out of cold water) are usually very grateful and scothing to the eye. The patient may use cold applications for ten minutes every hour or two if much discomfort is experienced.

If the pupil be active and not abnormally small, a drop every two or three hours of a simple boric acid solution will be all that is needed, and many times no drops are required. The eye should usually be covered with a pad and bandage until the epithelium is renewed. If the case is a serious one, a drop of atropine may be used to dilate the pupil.

If the foreign body has not been found on the lower lid or the cornea, the upper lid should be everted. The inner surface of the lid should now be carefully examined, and frequently the offending material will be found in a shallow groove about one or two millimeters from the edge of the lid. It may be wiped off with cotton as before, or removed by forceps or a spud if embedded in the mucous membrane.

If it cannot be found, the fornix or upper portion of the conjunctival sac should be exposed. The patient continues to look down, while the edge of the lid is pressed well back and somewhat downward, and a small smooth metallic or glass rod is pushed between the out-turned lid and eyeball, and what is now the lower, but at other times the middle part of the lid, can be thereby lifted away from the eye, exposing to view the whole upper portion of the sac. If seen here it may be removed with the swab or washed out by syringing.

In case there is a large denuded area, and infection is likely to occur on account of an existing dacryocystitis, conjunctivitis, or because of the infective nature of the wounding particle, it is often well, especially if the patient lives at a distance, to give an iodoform ointment gr. v in ℥ij of vaselin (atropine gr. 1 in addition in some cases). Of this, a piece as large as a pea is to be placed in the conjunctival sac three times a day.

When caustic alkalies have been the offending agent, it is well to wash the eye with a weak acid solution; in case of acids use alkaline solutions.

If unslacked lime (CaO) has been thrown in the eye very recently, avoid the use of water, but wash the eye out immediately with an oil, such as sweet, olive, or castor oil (a supply of the latter should be kept handy). A very strong solution of cane-sugar subsequently dropped into the eye forms an insoluble compound with the lime and renders it harmless. After the complete removal of the lime it is well to use cocaine or

holocaine in castor oil. A drop of this should be instilled into the eye sac every two or three hours to control pain. If opposing surfaces of the conjunctiva are destroyed the eyeball should be moved from side to side or up and down at intervals, or the lid may be lifted away from the ball to prevent union of the surfaces (symblepharon). If the conjunctiva in the fornix has been destroyed, probably nothing will prevent symblepharon, although some of the surgical appliances recommended may be useful. Ordinary air and water-slaked lime may be removed like any other foreign substance, as they are not caustic in their effect if completely slaked.

The Non-Operative Treatment of Trachoma.

Dr. F. J. Parker (in *Medical Record*) advises as follows: After thorough cocainization, the everted lids are rubbed hard three times a week with a cotton applicator dipped in bichloride 1-500. At home iced cloths and drops of an organic silver compound morning and night. After the conjunctiva has become smooth, treatment is continued by the application of a solution of tannic acid in glycerine, forty grains to the ounce. In the variety with hard follicles the copper sulphate crayon is applied to the conjunctiva, excess being washed away with boric acid. In the third stage, with cicatrical contraction of the lids and pannus, the writer recommends rubbing the conjunctival surface with castor oil, and making superficial liner scarifications with the knife. Copper crayon is also useful. Pannus should be treated by hot applications and atropin. Larger vessels may be divided at the corneal margin by the actual cautery.

The following slip is advised to be given to all trachoma cases, and will be found to be of much use in large clinics:

Instructions to Those Having Trachoma—Trachoma is a contagious disease of the eyelids, which if neglected will cause suffering and injury to the sight.

To avoid infecting others, those having the disease should observe carefully the following instructions:

1. They should have their own towels, handkerchiefs, wash cloths and toilet articles, which under no circumstances should be used by others.
2. They should sleep alone.
3. Avoid rubbing or touching the eyes, as the contagion may be carried on the fingers, and infect others through articles handled.
4. The hands should be cleaned often with soap and water.
5. Treatment should be attended to regularly, and continued until pronounced cured by the physician.

Furuncle of the Canal Otitis Externa Circumscripta.

D. J. McDonald, M.D. (in *Medical Brief*), in regard to treatment, says: If the case is seen sufficiently early, efforts to abort the inflammation are in order. Small doses of bi-carbonate of soda, repeated every fifteen to thirteen minutes, for six to eight doses, low diet, especially in the lithemic subjects.

If the pain is severe, the inflammation marked, proceed as follows: "Thoroughly disinfect the meatus with bi-chloride solution, 1-5000, with a cotton carrier wound with a tuft of cotton, wipe dry, push the auricle upwards and backwards to straighten the canal, spray the part with a tube of chloride of ethyl, tilted slightly forward till the part becomes white; it is thoroughly frozen. Now go in boldly with a tenotomy knife, cut deeply through the swollen tissues down to the bone, promote free bleeding by gently washing out with a solution of formalin, ten grains to a pint of boiled water, dry thoroughly, insert cotton pledgets, soaked in a five to ten per cent. solution of carbolic acid and glycerine, being careful that there is no undue pressure on the surrounding parts. Repeat the latter every three hours. After two to three days carefully inspect the parts. If there are any granulations, curette thoroughly. Apply to the bleeding surface twenty grains of chromic acid to an ounce of distilled water. Dust with powdered boric acid.

Later the patient will complain of severe itching in the canal, and is liable to infect himself again. Here use white precipitate ointment. Instruct the patient to keep the ear clean, with a disinfectant, and thoroughly dry the canal. This is important. In addition to the means stated above, look after the general health, correct the constipation by seeking out the cause. If dyspeptic, put on appropriate diet; if anemic, give small doses of an easily assimilable iron preparation. If there is a tendency to recurrence, give Fowler's solution to the physiological limit.

Editorials.

TORONTO GENERAL HOSPITAL.

The recent efforts of the Toronto Lodge of Elks to raise some money for the sick poor of Toronto were eminently successful. On Monday evening, February 20th, the representatives of the Elks handed to the representatives of the Toronto General Hospital $2,000, being the net proceeds of the "Fairyland" pantomime produced recently in Massey Hall. The ceremony took place in the Assembly Hall of the Temple Building, and, besides the full representation of the Toronto Lodge, there were fifty Hamilton brethren in attendance, headed by Supreme Exalted Ruler J. L. Counsell.

The three representatives of the Hospital, Mr. J. W. Flavelle, Mr. M. J. Haney and Dr. O'Reilly, were summoned to the lodge room, and introduced by Captain Arthur Kirkpatrick, Supreme Leading Knight. They were welcomed by Exalted Ruler, W. S. Ziller and Past Exalted Ruler James Glanville. Mr. Flavelle, in acknowledging the gift, returned hearty thanks on behalf of the Toronto General Hospital, and on behalf of the sick people ministered to therein. He felt sure that the efforts of the Elks, whose desires were voiced so happily by Mr. Glanville, would not only bring credit to their organization, but serve as an example to others to show the same helpfulness and kindness to those who suffer or may be in want. The Toronto General Hospital Trust is administered in such a way that the largest amount of good and helpfulness may come by reason of the exercise of the Trust. He stated that the authorities of the Hospital were all trying to do as well as they knew how with the limited means at their disposal. The Toronto General Hospital needs new buildings, and the Trust hopes that in some not too distant day this end may be realized. Mr. Cawthra Mulock's handsome gift was the commencement of happier days in this respect, and the Trust appreciates this act of the Elks the more on that account. "The name of the Society of Elks, as long as time lasts, will be associated with the Toronto General Hospital."

PHYSICIANS IN GOVERNMENT.

Mr. Whitney, the new Premier of Ontario, has highly honored the medical profession of Ontario in selecting three physicians for his Cabinet. Dr. William A. Willoughby graduated from the University of Victoria in 1867. After practising a few years in Grafton, Ont., he removed to Colborne, in the County of East Northumberland, where he has been in active practice for about twenty-eight years. His great popularity in his riding has been shown by his wonderful success in the various elections which he has contested, and although as a rule chances in the riding are about even, his majorities have generally been large, his last being exceptionally so. He has been a consistent, energetic and active Tory in politics, but notwithstanding such activity has always been popular on both sides of the House.

Dr. R. A. Pyne received his degree of M.B. from the University of Toronto in 1878 and M.D. in 1880. Soon after graduating he became Registrar of the College of Physicians and Surgeons of Ontario. As an important officer of that body he has shown remarkably good executive ability. His management of students, graduating classes and doctors throughout the province has made him exceedingly popular with all classes of physicians. We think we may fairly say that he is the most popular physician in Ontario. His duties in connection with the council have allowed him to take a deep interest in educational matters at all times. He is well known to have a warm feeling towards the University of Toronto, and at the same time he has always kept in touch with the Public Schools, as shown by the fact that he is an ex-Chairman of the Toronto School Board.

Dr. J. O. Reaume received his medical education chiefly in Trinity Medical College, and graduated M.D. from Trinity University in 1886. He has had rather a remarkable record. He has been eminently successful, both as a physician and politician. Success came to him very early in his professional career. He soon acquired a very large practice, and was exceedingly popular with all classes of the community, including his patients. Those who know him best describe him as a

genial, jovial, big-hearted Frenchman. He carried his county in the Conservative interests when it is doubtful if any other member of his party could have accomplished the task.

We offer our congratulations to our three friends. We believe they are worthy of the honor which has been conferred upon them, and we wish them success.

THE CANADIAN PREFERENCE LEAGUE.

The object of the Canadian Preference League is to foster a love for Canada and a preference for its products, its manufactures and its institutions.

To bring the efforts in this direction to a focus, a number of prominent men and women in various parts of the Dominion have formed an association under the name of "The Canadian Preference League," whose aim it will be to foster the growth of a national sentiment and to encourage the demand for all articles of home growth or home manufacture. The League invites Canadians of all classes (men and women) to join. Members engage themselves to give preference, when making purchases, to the products of this country and to all articles of Canadian manufacture, when the quality is equal and the cost not in excess of that of similar foreign products or manufactured articles. They are also expected to give preference to Canadian labor and to the educational and financial institutions of this country.

With the object of educating and strengthening members of the League in their determination to give practical preference to Canadian goods, a monthly journal is published under the name of *Canada First*. In this magazine every facility will be afforded for placing members of the League in touch with the latest developments in Canadian industry and commerce.

Both *Canada First* and the Canadian Preference League will be entirely free from political affiliation of any character Members of the League believe that the best, quickest, and surest way to strengthen the Empire is to improve their own particular part of it to the best of their ability. With each part developed as fully as possible, the whole cannot fail to become mightier than ever.

The only fee is $1.00, which includes membership in the League and subscription to *Canada First* for one year. This should be sent to the Honorary Secretary Canadian Preference League, Room 20, Home Life Building, Toronto.

ONTARIO MEDICAL ASSOCIATION.

The next meeting of the Ontario Medical Association will be held in the Medical Building of the University of Toronto, Tuesday, Wednesday and Thursday, the 6th, 7th and 8th of June.

Dr. Wm. Burt, of Paris, President of the Association, visited Toronto early in February to review the work of the Committee on Papers and Business and also that of the Committee of Arrangements. Both committees have nearly completed their work, and we are assured a good meeting may be expected. Among the outsiders expected are Dr. Ochsner, an eminent Chicago surgeon, who recently received a gold prize for his hospital exhibits at St. Louis, and Dr. W. B. Pritchard, of New York, whose name is well known in connection with his work on nervous diseases. A fairly good number of papers have been promised already and more are looked for. The Committee on Business and Papers is particularly anxious to obtain active assistance from the profession outside of Toronto. It is very desirable that members from all parts of Ontario should co-operate with this committee. It should be remembered that a brief history of an interesting case in practice is often more interesting and instructive than a long elaborate scientific address.

We doubt if any president in former years has taken quite such an active interest in the Association as Dr. Burt has done since his election last June. It is hoped that the members from the east, west and north will join hands with the president in endeavoring to make the meeting of this year the best in the history of the Association.

The annual meeting of the Medical Society of the State of New York was held at Albany early in February, under the Presidency of Dr. Wey.

DEATHS FOR JANUARY, 1905.

OFFICE OF THE SECRETARY PROVINCIAL BOARD OF HEALTH.

The deaths from all causes, as reported by 760 Division Registrars, for the first month of the new year are 2,216, and for the same month last year 2,200 were reported from a somewhat similar population. The population represented in these returns is 2,019,590, which makes the mortality rate 13.1 in 1,000, being the same as in 1904.

As may be seen by the comparative table, the total number of infectious diseases show a slight increase, which is largely due to the more complete return of measles, there being 236 more cases, but it is pleasing to know the deaths are less by 5.4 per cent.

Smallpox and scarlet fever show a marked decline, while diphtheria has been more prevalent, yet the case mortality remains much the same, being 15.2 per cent. in 1904 and 16.2 per cent. in 1905.

Out of 412 cases nine cities reported 269 cases with 33 deaths. Typhoid fever, with a greater number of cases reported and fewer deaths, would indicate that physicians are complying more readily with the Health Act in notifying Health Officers and Boards of Health of the cases coming under their care, or else the disease is of a milder type than that of a year ago. Tuberculosis caused 169 deaths, or 10 less than in January, 1904.

COMPARATIVE TABLE.

	1905.		1904.	
DISEASES.	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	10	0	103	0
Scarlet Fever	223	12	380	24
Diphtheria	412	67	382	58
Measles	268	4	32	2
Whooping Cough	27	4	25	7
Typhoid Fever	69	21	39	23
Tuberculosis	174	169	179	179
	1183	277	1140	293

DIPHTHERIA BY CITIES.

CITIES.	CASES.	DEATHS.	POPULATION.
Chatham	12	0	9,068
Guelph	1	1	11,496
Hamilton	36	3	52,634
Kingston	2	0	17,961
London	18	0	37,983
Ottawa	4	0	59,928
St. Thomas	1	0	11,485
Stratford	1	0	9,959
Toronto	194	30	208,040
	269	34	

CHAS. A. HODGETTS, M.D.,
Secretary Provincial Board of Health.

MEDICAL ITEMS.

We are informed by Messrs. Blackiston, Son & Company, of Philadelphia, Pa., that during the year 1904, 15,090 copies of Gould's "Medical Dictionary" were sold, making the total sales to date 181,173.

A new wing of the Woodstock General Hospital was officially opened February 14th. Among those present were the following from Toronto: Mr. J. W. Flavelle, Chairman of Toronto General Hospital Trust; Dr. Charles O'Reilly, Superintendent Toronto General Hospital; Dr. Bruce Smith, Dr. Palmer, Dr. Bruce and Dr. B. E. McKenzie. Mr. Flavelle and Dr. O'Reilly delivered short speeches.

As announced in our last issue, the International Society of Gynecology and Obstetrics will be held in St. Petersburg, July 11th to 18th, 1905. We are requested now to state that the Chairman of the American Committee, Dr. A. Palmer Dudley, of 678 Madison Avenue, New York City, will be pleased to do all in his power to aid intending visitors, and will transmit to the committee of St. Petersburg all communications referred to him.

We regret to state that the *Canada Medical Record*, of Montreal, has ceased to exist. Dr. Francis W. Campbell, editor during its thirty-three years of existence, tells us the principal cause which has contributed to the demise, is the old one, the want of money, and mentions incidentally that it is not creditable to the medical profession, certainly not to the *Record's* subscribers, that out of one thousand on the mailing list not fifty paid the paltry annual fee of one dollar.

At the annual meeting of the Southern Surgical and Gynecological Association, held in Alabama, December 13th to 15th, the following officers were elected: President, Lewis C. Bosher, Richmond; 1st Vice-President, John D. S. Davis, Birmingham; 2nd Vice-President, I. S. Stone, Washington; Secretary, W. D. Haggard, Nashville; Treasurer, R. S. Rosser, Dallas. The next meeting will be held in Louisville, December, 1905. The monument erected by the association to its founder, the late Dr. W. E. B. Davis, was unveiled in Birmingham, December 14th.

It was rumored a short time since that Dr. L. F. Barker would remove shortly from Chicago to the Johns Hopkins Hospital, at Baltimore. It was supposed that he desired to do some work in clinical medicine. We understand that, on that account, he has been appointed Associate Professor in Rush Medical College, Chicago. This may signify that he will remain in the western city.

Personals.

Dr. E. Herbert Adams and Dr. Maybury, of Toronto, went to Jamaica in January.

Dr. Orlando Orr, of Toronto, sailed from New York for Liverpool February 1st.

Dr. T. G. Roddick, of Montreal, is spending a portion of the winter in the Bahama Islands.

Dr. G. Sterling Ryerson, of Toronto, went to Atlantic City February 5th and returned February 21st.

Dr. Wm. Oldright, of Toronto, attended the meeting of the American Health Association at Havana in January.

Dr. J. Algernon Temple, of Toronto, went to Sidney, C.B., January 28th, and returned to his home February 6th.

Hon. Dr. Reaume, Commissioner of Public Works, will, it is said, give up practice in Windsor and reside in Toronto.

Doctors W. J. O. Malloch and A. C. Hendrick, of Toronto are going to London, England, in March, for post-graduate work.

Dr. Jos. S. A. Graham passed his final examinations for the conjoined M.R.C.S. (Eng.) and L.R.C.P. (Lond.) in the latter part of January. He expects to return to Toronto and commence practice in May.

The following physicians were recently appointed coroners for Ontario: Dr. Robert E. Darling, Goodwood; Dr. James Galloway, Beaverton; Dr. William Gilpin, Brecken; Dr. W. J. Henderson, Cannington.

Dr. Jas. F. W. Ross, of Toronto, after spending a few weeks in Southern California, went to New Orleans, where he will spend a fortnight taking in the Mardi Gras. He will probably reach Toronto about April 1st.

Dr. W. P. Caven, of Toronto, who had a serious attack of la grippe, affecting the antrum and middle ear, has recovered. He went to Atlantic City to recuperate February 7th and returned to Toronto February 23rd.

Dr. Marshall Dean (Tor. '99), of Brighton, who practised in Fort William for three years after graduating, has just returned from a prolonged trip to Great Britain and the Continent, where he spent about two and a half years.

Obituary.

GEORGE T. HUNTER, M.D.

Dr. Hunter, who was at one time a resident of Toronto, and for many years practised in New York, died somewhat suddenly at St. Augustine, Fla., February 11th.

HARRY W. SPENCE, M.D.

Dr. Spence (Tor. '00) died at the residence of his father, Toronto, February 3rd, after a comparatively short illness, from heart disease. After graduating, he went to England and took the double qualification of the two colleges of London. He was attached to one of the British regiments during the South African War, and after peace was declared went to India, where he spent some months. He returned to Canada in 1904, and commenced practice in Ottawa. He spent one year as resident physician in the Toronto General Hospital, and was very popular with all classes, including his professors and his fellow students.

Correspondence.

To the Editor of CANADIAN PRACTITIONER AND REVIEW :

SIR,—I have read with great interest the article by Mr. F. B. Shuttleworth upon Diphtheria Antitoxin, which appears in the current number of your journal. He gives there the results of the use of this remedy at the Riverdale Hospital for the last ten years, and on the whole is persuaded that cases treated with antitoxin show a higher mortality than cases not so treated. The mortality of the former averaging 18.7 per cent., while that of the latter was considerably less.

Are we to conclude then, that antitoxin is of no use, or even is harmful? If we do so we must needs go contrary to the enormous bulk of evidence which has been collected the world over in favor of this remedy.

In the *British Medical Journal* of May 9th, 1903, I published a paper giving the results of the use of antitoxin at the Victoria Hospital for Sick Children here, and venture now to quote from that article as follows :

" Between January 1st and July 7th there were 42 cases of diphtheria admitted to the infectious wards, all of which showed the Klebs-Loeffler bacillus. In nearly all cases the bacillus has been of the short variety. All, except a few of the mildest, were given antitoxin at once on admission, frequently before the bacteriological report had been received, the initial dose varying from 1,500 to 4,000 units. The dose was repeated in a few hours if required. In addition, the throat cases had their fauces painted with Loeffler's solution of menthol and sesquichloride of iron, and where the nose was affected a spray of very dilute corrosive sublimate was used.

Of the 42 cases thus treated, 41 recovered completely; one died, a girl, aged 13, and some details of her case are as follows :

It seems that she had been in the city isolation hospital for several weeks before suffering from diphtheria. She was discharged in May, and was admitted to the Children's Hospital on June 12th, for genuvalgum. Her history states that she had " kidney disease," and her urine, on admission, contained albumen and casts. On June 23rd she was sent into the diphtheria ward suffering from a mild attack of faucial diphtheria. So mild, indeed, was the case that she was not given antitoxin. A week later, when her throat was clear and her temperature normal she developed uremic symptoms, and died very quickly.

She was given 3,000 units of antitoxin when the uremia developed, in hopes of neutralizing the toxin that might be irritating the kidneys, but no amelioration resulted. The necropsy showed the kidneys to be contracted and markedly cirrhotic and white on section. The left weighed 5 dr. 12 gr., and the right 5 dr. 36 gr.

It is thus scarcely fair to call this a case of death from diphtheria, although that disease undoubtedly precipitated the final result. If antitoxin had been early and freely used possibly that result might have been averted, as the cirrhosed kidneys might have been saved the toxic irritation—but one can only surmise on this point."

To my mind when antitoxin fails to reduce the mortality in diphtheria, the failure must be due to one of three causes:

1st. Bad antitoxin.

2nd. Insufficient dosage.

3rd. Late administration of the remedy.

1. Mr. Shuttleworth does not give the source of the antitoxin which has so persistently failed to maintain its record at the Riverdale Hospital, but no doubt the manufacturers will be ready enough to produce evidence from other sources in defence of its purity and strength,

2. Mr. Shuttleworth gives the average dosage employed at the hospital, and, on the whole, this appears lo have been fair, though by no means generous.

3. Mr. Shuttleworth does not state at what stage of the disease the antitoxin was administered, although he concludes from what seems like very insufficient evidence, that the time of administration "has not been a factor of much importance."

Here, in my opinion, lies the explanation of the sad failure of antitoxin to reduce the diphtheria mortality at the Riverdale Hospital.

In order to be effectual antitoxin must be administered *early*, as is well shown by Dr. Otto Jelinek's figures (*Das Oesterreichsches Sanitats Wesen.*, No. 52, 1900). He collected the reports of all cases of diphtheria reported in all parts of the world to the close of 1898, in all 127,359. His table is as follows:

Those treated with antitoxin on			1st	day	had a mortality of	5.07	per cent.
"	"	"	2nd	"	"	8.49	"
"	"	"	3rd	"	"	15.56	"
"	"	"	4th	"	"	23.36	"
"	"	"	5th	"	"	30.02	"

Recent reports of the collective investigations of the American Pediatric Society, the Austrian Sanitary Department and the Imperial German Health Office fully confirm these results up to the present time.

From this it will be seen that in order to be effectual the

remedy must be used *early*, and this is, I think, the universal opinion still held. In order to make Mr. Shuttleworth's figures of any value at all we should be informed upon what day of the disease the remedy was given. In fact, all cases in which it was first administered after the 3rd day would better be excluded, as in the opinion of most authorities the remedy by that date has nearly lost its efficacy.

In spite of Mr. Shuttleworth's paper then, I, for one, continue to have great faith in antitoxin, and still endorse the conclusions I came to in the article above referred to, namely:

1st. Every case of diphtheria should be treated with antitoxin. As a rule the diagnosis is easily made clinically, and it is better in such cases not to wait for the bacteriological report, but to inject the serum at once. Then, if the diagnosis be confirmed by the bacteriologist, one has "stolen a march" of several hours on the disease; if the case proves not to have been diphtheretic, one has at least done no harm.

2nd. The serum should be administered not only early, but also freely, 3,000 units being an average first dose.

3rd. This use of antitoxin in no way interferes with the employment of any medicinal or other treatment which may be indicated, but all the latter are of secondary importance during the first few days of the illness.

ROBERT D. RUDOLF.

TORONTO, February 3rd, 1905.

Book Reviews.

A Text-Book of Clinical Diagnosis. By Laboratory Methods. For the use of Students, Practitioners, and Laboratory Workers. By L. NAPOLEON BOSTON, A.M., M.D., Associate in Medicine and Director of the Clinical Laboratories of the Medico-Chirurgical College, Philadelphia; formerly Bacteriologist at the Philadelphia Hospital and at the Ayer Clinical Laboratory of the Pennsylvania Hospital. Octavo volume of 547 pages, with 320 illustrations, many of them in colors. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Cloth, $4.00 net; Sheep or Half Morocco, $5.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

Dr. Boston here presents a practical manual of those clinical laboratory methods which furnish a guide to correct diagnosis, giving methods that can be carried out by the busy practitioner in his office as well as by the student in the laboratory. He has given special attention to outlining in progressive steps the various procedures in clinical technic, such steps being illustrated wherever possible. All the more recent methods for the examination and staining of blood are described and illustrated by original drawings, and the subject of serum-diagnosis is very carefully considered. The newer methods for the estimation of sugar, Bence-Jones' albumin, uric acid, and purin have received thoughtful consideration. The subjects of animal parasites, diseases of the skin, transudates and exudates, and secretions of the eye and ear are very fully treated. Attention has also been paid to inoscopy and cyto-diagnosis.

A Text-Book of Legal Medicine. By FRANK WINTHROP DRAPER, A.M., M.D., Professor of Legal Medicine in Harvard University; Medical Examiner for the County of Suffolk, Massachussetts. Octavo volume of 573 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1905. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

The subject of legal medicine is one of great importance, especially to the general practitioner, for it is to him that calls to attend cases which may prove to be medicolegal in character most frequently come. Dr. Draper has written his work both for the general practitioner and the medical student. He has not only cited illustrative cases from standard treatises on forensic medicine, but these he has supplemented with details from his own exceptionally full experience—an experience gained during his service as Medical Examiner for the City of Boston for the past twenty-six years. During this time his investigations have comprised nearly eight thousand deaths under a suspicion of violence. The author's long teaching career has enabled him to state facts and detail procedures with a clearness rarely met in a work on legal medicine. Withal, we think Dr. Draper's book is unusually satisfactory; it is more,—it surpasses our expectations.

Diet in Health and Disease. By JULIUS FRIEDENWALD, M.D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and JOHN RUHRAH, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Octavo volume of 689 pages. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Cloth, $4.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

This work is practical and comprehensive, being prepared to meet the needs of both the general practitioner and the medical student. It contains a full account of food stuffs, their uses and chemical compositions. Dietetic management in all diseases is carefully considered, the articles on diet in diseases of the digestive organs containing numerous diet lists and explicit instructions for administering. The feeding of infants and children, of patients before and after anesthesia and surgical operations, and the latest methods for feeding after gastro-intestinal operations have never before been discussed with such practical detail. The subject of rectal enemata is given completely, with recipes and full instructions as to technic. Diet is considered in its relations to age, occupation, and environment; and the beneficial results from the rest cure have been accorded prominent consideration. There is also a section on food adulteration and the resultant diseases.

Saunders' Medical Hand-Atlases—Atlas and Epitome of Operative Ophthalmology. By DR. O. HAAB, of Zurich. Edited, with additions, by G. E. DE SCHWEINITZ, M.D., Professor of Ophthalmology in the University of Pennsylvania. With 30 colored lithographic plates, 154 text cuts, and 377 pages of text. Philadelphia, New York, London: W. B. Saunders & Co. Cloth, $3.50 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

Professor Haab has laid the medical world under obligation by his series of atlases on the eye. The volume before us forms an admirable conclusion to the series. In this volume he covers the ground completely. He begins with a discussion of the proper construction of operation rooms, narcosis, sterilization of ophthalmic instruments, bandaging, local anesthesia, salivary infection and instruments. Practical information is given on each point, his remarks on anesthesia, general and local, are especially full and admirable. Ophthalmic operations are described with the fidelity and clearness which thirty years' practice brings. The colored illustrations and text cuts as well are clear and correct. The editor, Dr. De Schweinitz, has rendered the volume much more valuable by his additions. Altogether this is a book which any one having to do with operations on the eye will find of much value and interest.

J. T. D.

Selections.

The Action of Antistreptococcic Serum.

Since this substance was first introduced into therapeutics, there have been diverse views as to its method of action. It is certainly not an antitoxin, since no soluble poison can be separated from the streptococci. Nor is it a bacteriolytic serum, because the streptococci thrive in it and multiply rapidly.

In the peritoneal cavity of a rabbit injected with this substance, we find a more active phagocytosis than normal, the phagocytes having the power of taking up the virulent cocci. Neufeld and Rimpan (*Deutsche Med. Wochens.*) have pursued the subject further, and find that the streptococcic serum does not bring about a change in the leucocytes, but so alters the cocci that they are unable longer to resist the phagocytes.

It seems probable, therefore, in the light of their researches, that although there is a stimulation of the phagocytes, the serum at the same time neutralizes something in the bacteria, which previously had prevented them from being devoured by the phagocytes. This substance in the antistreptococcic serum is of the nature of an amboceptor and is not destroyed by heating the serum to 59° C for half an hour.

There is still a great deal of doubt about the reason for its failure in some cases and its success in others. Some investigators think that the serum for clinical purposes must be prepared by injecting the animal with a mixture of many strains of cocci. Others insist that the bacteria must not be passed through animals, but must be used as they come from the human body.

Manual Compression of the Heart for Cardiac Failure During Chloroform Anesthesia.

Sick (*Centralblatt fuer Chirurgie*) reports a case of sudden cardiac and respiratory failure in a fifteen-year-old boy during an operation for tubercular peritonitis under chloroform anesthesia. Except for an early momentary return of respiration and faint heart sounds, artificial respiration and massage over the heart were employed for a half hour without any effect.

Artificial respiration was continued, and the heart was exposed fifteen minutes later by resecting a portion of the chest wall. Direct rhythmical compression of the heart for fifteen minutes was followed by one feeble cardiac contraction. Continued manual compression and the application of hot compresses to the anterior surface of the heart for another fifteen minutes resulted in strong, regular cardiac pulsations.

The patient recovered consciousness two hours after the completion of the operation, but finally died about twenty-four hours later.

Alcohol in Typhoid Fever.

In the Bradshaw lecture this year Caiger remarked that in the majority of instances of typhoid fever alcohol was not only indicated but was distinctly harmful, nevertheless, in certain cases it was of use as a stimulant. The indications for its use he specified as follows: Constant delirium and sleeplessness with muscular tremor, feeble circulation, and a dry, brown tongue; unusual weakness of the pulse without other signs; cardiac dilatation, cyanosis, pulmonary congestion, and pneumonia; hyperpyrexia, diarrhea, and intestinal perforation. In elderly people alcohol may be administered with advantage. In patients who are very much depressed mentally a good article of champagne is the best form of alcohol to administer. Alcohol, however, cannot compare with digitalis and strychnine for lasting effect where there is ventricular dilatation and a tendency to, or in the presence of, pulmonary congestion.—*The Clinical Review.*

Protruding Irritable Hemorrhoids.

Rumvil advises that the parts be cleansed with cold water (unless hot water is found to be more comforting) three times daily and then anointed with the following, which may also be spread on gauze and maintained in position by a T-bandage:

℞ Opii pulv ..... gr. xx.
Gallæ pulv .....
Plumbi acet ..... aa. gr. xxx.
Ichthyol, ... ℥ ss.
Petrolatum, ... ℥ i.—M.

The bowels should be rendered soluble, and along with this local attention general care is demanded, with reference especially to the dietary, the use of alcohol and the habit of work and rest.—*The Clinical Review.*

How to Overcome Insomnia.

A variety of expedients have been resorted to to induce sleep. Practically all are based upon fixing the attention and exercising the mind in some monotonous performance. Perhaps the commonest is that of "counting the sheep over the fence." Less frequently repeating the alphabet backward and other means of fixing the attention, with a consequent mental fatigue which leads to sleep. How valuable these methods may be can only be estimated by individual experience. Unquestionably they have a sound basis, as they produce a mental state which induces sleep.

Far better than mere counting or other effort is the suggestion

made by Dr. Learned some years ago—that of deep breathing and at the same time counting the respirations. When lying down the respirations usually fall to fourteen or even twelve to the minute, but if forced inspirations are made the rate may go as low as eight or six, consequently there will be quite a free interval between respiration and inspiration in which the lungs are quiet. Deep breathing is a physically fatiguing process. Associated with this is the mental concentration of keeping up the effort, and at the same time keeping track of the number of respirations. In moderate degrees of insomnia this method is unquestionably efficient. The writer's own experience and those of individuals to whom he has recommended it have shown that it is rare that an individual can breathe deeply more than a hundred times without falling asleep. As a matter of fact, if he is not aleep at the end of that time he will become so fatigued and discouraged that he will give up the attempt, feeling that he would rather be awake than to make the effort necessary to continue the struggle.

In Dr. Learned's original description of this method he recommended that fatiguing muscular exercises be associated with it, such as raising one arm, holding it up until fatigued, then raising the other one, then in order the legs, and lastly the head, and then beginning over again. These muscular efforts of the extremities are not essential and render the process unnecessarily complicated, though they may be tried when the breathing exercise fails.—*Medicine.*

The Mayo brothers, of Rochester, Minn., have recently rendered a report covering one thousand cases of operation for gall-stone disease, with a mortality of five per cent. In this report all cases of whatever character are included. Therefore, when forty cases of malignant disease, with a mortality of 22.5 per cent. are allowed for, the significance of the above-mentioned low death rate can be in a measure appreciated.—*The Clinical Review.*

Physicians may be pleased to learn that Dr. Edward Playter gives particular attention to the home treatment of consumptives. He requires patients to remain under his care, observation and study, from one to three weeks, when he directs them how they can best live, as in respect to breathing, diet, exercise, etc., and be then treated at home by the family physician, to whom, indeed, as a busy practitioner, this offers relief, and freedom from a measure of responsibility. Address, 762 Broadway Avenue, Toronto.

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Original Communications.

HEMORRHAGIC PANCREATITIS.*

BY W. J. McNICHOL, M.B. (TOR.).

On November 30th, 1903, I was called about 10 p.m. to see a Mr B.—, aged 45. His family history was excellent. Personal history good.

He was formerly a merchant by occupation, but on account of gradually increasing obesity sold his business and bought a farm, thinking by this means to reduce his flesh, or, at least, to stop the increase. His habits were most excellent; he did not drink, and his previous history was good, except for his tendency to flesh, and a little indigestion at times, accompanied by little colicy pains now and then, and what he called "gaseous spells," especially after meals. He was a very hearty eater, in fact, too much so. He had no typical history of gall-stones, although there was a very slight tinge of yellow in his skin, otherwise he had always been a healthy, strong, robust man. One evening, about a week or ten days previous to November 30th, 1903, he attended a church entertainment, and something that one of the speakers (a Methodist minister) had said, suddenly dawned on him as particularly funny or ludicrous, and he suddenly burst out into hearty and uncontrollable laughter, in fact, so much so that the audience and I had a hearty laugh at his expense. When questioning him I remembered the incident, and asked him if he felt all right after it, and he told me that he had a good deal of pain after that, and passed a very restless and uncomfortable night, and that while feeling no great inconvenience the week following, he did not feel just as he thought he ought to.

* Read before the Hamilton Medical Society, March, 1904.

On November 30th, about 9.30 or 10 p.m., I was called in. He said he had eaten an unusually hearty dinner at noon, but felt nothing out of the way until about 5 p.m., when he was suddenly seized with a violent pain in the upper abdomen. In a few minutes he vomited once or twice, but no more after that. In a couple of hours he was a little easier, although pain still continued until about 9.30 or 10 p.m., when it became very severe.

Examination: Inspection—I found him on his back in bed, the abdomen greatly distended all over, but especially in the upper part, so much so as to appear to crowd the lungs upward so firmly as to give him little breathing space. The respirations were very hurried and costal. The face was anxious, but not the true "Facies Hypocrates"; cyanosis was marked. He was very uneasy and restless, some eructations of gas, and complained of great pain in the upper half of the abdomen. The pulse was weak and irregular, the "pulsus celer" variety. The shock (a very important feature) was profound, due, I believe, to the great pressure upon, and distortion of, the solar plexus and nerve supply of the abdomen in general. He complained of great pain in the region of the back, corresponding to the pancreas, the lower dorsal, and upper lumbar region. This latter is a distinguishing point of this trouble, which, I expect, will be fairly constant, and is not mentioned in any text-book or article that I have at hand, and should be of some value in making a differential diagnosis. The temperature was normal. Pulse irregular, 110. Patient was quite rational. Pain increased upon movement or turning.

Palpitation—Tenderness over the whole abdomen, most marked over the upper right abdominal region, but on account of the great distention and tenderness, sufficient pressure to elicit a mass of any kind could not be made.

Percussion—The whole abdomen was very tympanitic. Liver and splenic dulness were absent. Diffuse tenderness over the lumbar and lower dorsal region at back.

Auscultation—Nothing found except apparent absence of usual intestinal sounds. Heart and lungs were normal.

Urine—He passed some which contained considerable albumen, otherwise nothing of importance.

I gave him morphia to relieve the pain, and on account of the great distention and tympanitic condition, gave him repeated enemas at intervals, thinking that I could relieve some of the distention and distress by the removal of the intestinal contents and flatus, but with no result except the return of the enema. The morphia relieved him somewhat, and at times without it he seemed a little easier, but on account of the serious condition of the patient, and the unusual picture before me, and

not being able to satisfy myself with a diagnosis of any of the more common troubles in the abdomen, I stayed and watched him practically all night. Early in the morning I called up Drs. Cockburn and Bauer, and told them I had something unusual on which I would like their opinion. They met me in consultation at 10 a.m. .Patient was up and dressed, and while much distressed could sit in a chair possibly more comfortably than he could lie down. They went over him carefully, and found the condition before described. The conclusion arrived at was, that it was acute pancreatic hemorrhage, and if not that, probably rupture of a duodenal ulcer. The patient was told of the seriousness of his trouble, and advised to go to the hospital and have an immediate laparotomy to remedy, if possible, his condition. He wished first to attend to his business affairs, and, moreover, was averse to any operative procedure. As he did not improve he finally went, and, later on, consented to operation, which, owing to these reasons, was not done until 6 p.m., by which time his condition had become alarming, Pulse very weak and irregular, breathing very superficial, costal and hurried, with abdomen greatly distended. Temperature 101. Light delirium. Chloroform was used as the anesthetic, and administered by Dr. Gilrie. Drs. Cockburn, Bauer and myself, operated. An incision to the right of the umbilicus and upward a considerable distance, and later extended each way. As soon as the abdomen was opened the intestines were forced out and the abdominal cavity was found filled with a bloody serous fluid, upon which floated apparent fat globules. No peritonitis was present, but areas of fat necrosis, from the size of a pin head to larger than a split pea, were present upon the peritoneum, omentum, and especially on the transverse mesocolon, in fact, anywhere over the abdomen where any fatty tissue was present. The pancreas was very much enlarged and swollen, and practically disorganized with an enormous amount of blood in the retroperitoneal tissue. The gall-bladder was examined and found normal. The abdominal organs were so distorted and so much damage had been done, that after as much fluid as possible was removed, the abdomen was closed. Considerable relief was given by the evacuation of the fluid, but the patient died fourteen and a half hours afterwards.

Post-mortem Examination—The abdomen was filled with the fluid mentioned. The areas of fat necrosis described were present in abundance. A gall-stone the size of a cherry was found in the cystic duct at its junction with the common duct. I may mention here that gall-stones have a place in the etiology of this disease which will be mentioned later. Enormous masses of blood were found in the retroperitoneal tissue follow-

ing around behind the ascending colon, with a large clot deposited behind the cecum, and also in the perinephritic tissue, it appeared to follow the attachments of the mesentery and mesocolon. The pouring out of these enormous amounts of blood behind, and pushing forward the intestines and crowding upward the lungs, was the cause of the great distention of the abdomen, the difficult and costal breathing, and the cyanosis. The kidneys, appendix and all other organs were normal. The pancreas was six or seven times its normal size, the head a large indurated mass and the body torn and disorganized. A smear for bacteriological examination from the pancreas was taken, but we had only one sterile tube in our possession, and this, unfortunately, got destroyed, thus we were deprived of the bacteriological knowledge to be obtained.

Pathology—The gland was swollen, congested and enlarged five or six times its normal size. It was torn and damaged. The head was enlarged, hard and indurated. The blood and escaped ferments had dissected and penetrated the gland substance. The lobules and acini destroyed in parts and replaced by areas of necrosis, in which were seen at the margins of the necrotic areas deposits of blood cells and pigment polynuclear leucocytes and fibrin. Necrosed, disintegrated, columnar epithelium lined the minute ducts, as also was the condition of the columnar cells lining the acini. Normally these columnar cells of the acini show an outer homogeneous or faintly striated portion, which becomes deeply stained with dye, and contains the nucleus and an inner granular portion, which does not easily stain. In this case these cells would not stain as usual, showing the fatty necrosis. The islands of Langerhans are not so susceptible to the corroding action. You will pardon my introducing this point here, but it is interesting. The Islands of Langerhans originate through a proliferation and differentiation of the cells of the primitive secreting tubules, and Opie has shown that a certain proportion of cases of pancreatic diabetes have a definite relation to lesions of the islands of Langerhans. These observations have been confirmed by German and American investigators that these islands have a physiology distinct from the remainder of the pancreas, and concerned especially in carbohydrate metabolism and, therefore, of prime importance in the pathology of diabetes.

The Pancreas: The Neglected Gland—Of the medical and surgical diseases of this most important organ and their treatment our knowledge is in its infancy, but the eyes of the profession the world over are being turned in its direction. Operative interference for disease of the pancreas is still at the present time the most incomplete chapter in the realm of surgery. It is scarcely twenty years since Gausenbauer

described the first operation for cysts of the pancreas, and for many years the surgery of this organ was confined to the treatment of this affection, which was a comparatively easy task so far as the technique was concerned. In regard to the other pancreatic affections, it is only in the last ten years that surgical treatment has been seriously undertaken. Even as late as 1891 and 1892 the anatomists, Von Gerlach and Joessel, dismissed the subject of the topographical anatomy of the pancreas in a few words, stating that the organ had no clinical interest as it was almost impossible for the surgeon to reach it.

Among further reasons for our lack of knowledge in this subject, with the exception of the cystic condition, it is seldom with our present knowledge that we have an opportunity to operate upon a diseased pancreas, hence the personal experience of each surgeon is small. Two additional reasons for the non-development of pancreatic surgery is its anatomical position, surrounded firmly and intricately by such important viscera, vessels and nerves, and, moreover, the present difficulty of diagnosis, so often not made until the post-mortem examination.

A third reason is that operation upon the pancreas is more dangerous than upon any other abdominal organ, and this is added to by the usually low condition of the patient. A still further danger lies in the peculiar physiological character of the gland itself. Two points of consideration here are: (1) On account of the richness of the gland in blood vessels we get severe and protracted hemorrhage, difficult to control. (2) By the escape of the pancreatic secretion from the injured parenchyma of the gland into the gland itself and the abdominal cavity, it causes a most damaging effect upon the gland and upon the abdominal contents by the action of the escaped ferments, principally the action of steapsin upon fat causing fat necrosis, and thus a breeding ground for bacteria, and also preventing the formation of adhesions so desired by the surgeon in confining an infection.

I will give a brief résumé of the disease, its etiology, symptoms, diagnosis and treatment as we know it to-day. In no article or text-book I have read can I find any exhaustive article putting it on a standard medical and surgical basis as other diseases.

It is difficult to separate the purely hemorrhagic and that in which the hemorrhage is preceded by inflammation varying in degree.

Etiology—The disease is most commonly found in the middle-aged with a preponderance of males, although McPhedran reports a case in a nine months' child. The victims are usually the subjects of obesity and often addicted to alcohol,

and have a history of occasional colicky pain accompanied by eructations of gas, and may possibly give a history of gall-stone colic. Further causes are a hemorrhagic diathesis, alcoholism, arterio sclerosis, syphilis, fatty degeneration of the organ in obesity, traumatism, embolism and thrombosis. From the two latter a small area of necrosis is caused, and thus destruction of the parenchymatous cells, causing an infiltration of this area with the pancreatic ferments, the increased undermining of the tissue and a further hemorrhage. The corroding action of the bacteria coming from the blood, duodenum, or bile passages or vessels, or neighboring organs, in the ducts allows the escape of these fat-splitting ferments with the same action as above, the amount of damage done depending upon the resistance of the vessels in the interstitial connective tissue. In infection from cholangitis and cholelithiasis the infection travels from the bile duct through the ampulla vateri in a backward direction to the pancreatic duct. Opie has established the fact that a gall-stone can be caught in the ampulla Vateri, and can produce a retrograde flow of infectious bile into the ductus pancreaticus. Malignant growths, cysts, etc., are further causes.

Symptoms—One of the characteristic features is the sudden onset, usually with violent colicky pain in the upper abdomen, nausea and vomiting. The abdomen becomes distended and tympanitic, and there is usually constipation. There is tenderness over the whole abdomen, particularly the upper. The temperature at first is low, often sub-normal, but later rises. The extremities are cold, cyanosis is usually marked, breathing is hurried and costal. The shock is usually intense on account of the pressure on the solar plexus and nerve supply of the abdomen in general. This shock is a prominent feature in the disease. There is great pain and tenderness in the back in the area corresponding to the pancreas, *i.e.*, the upper lumbar and lower dorsal region. This, as I said before, is, I think, a distinguishing feature in this disease not often mentioned. Fitz's rule might be repeated here: "Acute pancreatitis is to be suspected when a previously healthy person, or sufferer from occasional attacks of indigestion, is suddenly seized with a violent pain in the epigastrium followed by vomiting and collapse, and in the course of twenty-four hours by a circumscribed swelling, tympanitic or resistant, with a slight rise of temperature."

Differential Diagnosis—The three principal conditions from which it is to be differentiated are:

1. Perforation of gastric or duodenal ulcer.
2. Intestinal obstruction high up.
3. Acute perforative appendicitis.

With regard to the first, *i.e.*, the ulcer, there will have been

most likely premonitory symptoms of the disease, including pain on eating, tender stomach for some time preceding, hematemesis, black or coffee-ground stools and anemia, and rather than the fat, robust person in pancreatitis we will have a more emaciated subject.

With regard to the second, intestinal obstruction, in this the vomiting is more persistent, frequent and likely fecal. The onset is not so sudden; the shock is not so profound and not so early. Cyanosis is not so marked, breathing not nearly so interfered with, and tenesmus is often present. Passing of fecal matter and faltus is soon at an end, blood and mucus is often passed. The pain is more in keeping with the peristaltic action of the bowels, and, moreover, the mass of obstruction can often be palpated and defined.

With regard to the latter, *i.e.*, perforative appendicitis, this can usually be detected by evidence to be found in the region of the cecum.

As regards the urinary examination, our knowledge at the present time is too meagre to say that any constituents are prominent or constant enough to aid much in the diagnosis. Glycosuria is said to appear early in the trouble, but in small quantities, and a little later disappears. Undigested fat and muscle fibre in the stools is said to be fairly constant and may be of some aid.

The Pathology—Fitz divides pancreatitis pathologically into (1) hemorrhagic, (2) suppurative and gangrenous. Robson makes a preferable classification clinically into (1) acute, (2) sub-acute, (3) chronic pancreatitis.

The traumatism, eroding action of bacteria upon vessels or ducts, arterio sclerosis, fatty degeneration and syphilitic degeneration cause the escape of blood and the pancreatic ferments into the gland substance. If the injury or hemorrhage is not already severe enough, these cause areas of cell necrosis, and the increasing disintegration of the gland. At the margin of the necrotic area are accumulations of inflammatory products, red blood corpuscles some broken down with deposits of pigment, polynuclear leucocytes and fibrin with the lobules and acini of the gland destroyed.

The Treatment—The treatment of the disease, if at all of any extent, is surgical: opening the abdomen and packing to protect the abdominal cavity, flushing out abdomen if necessary, gauze tampons to control the troublesome and persistent hemorrhage and to have free drainage. Whenever possible drainage by lumbar incision should be made also. Mikulicz states that severe injuries of the pancreas, which are not submitted to operation, terminate fatally almost without exception, and that an exploratory laparotomy should be made

whenever there is a question of severe pancreatic hemorrhage. Woolsey, of New York, has operated with success upon three cases of pancreatitis. Bunge, of Konigsberg, who has demonstrated, as also has Opie, that pancreatic hemorrhage and fat necrosis are caused by the injection of air, paraffin, and especially oil, into the pancreatic arteries, also advises immediate operation. Experience has taught us, and the reason for operation may be summed up in this way, and the surgeon should bear in mind these facts:

1. The very slight tendency of pancreatic hemorrhage to stop spontaneously.

2. The locally destructive and general toxic action of the pancreatic ferments set free by the inflammatory and hemorrhagic process.

3. When the symptoms are at all severe the course is clear. The only rational therapy is to open the focus with the knife and drain the toxic and infectious exudate.

4. Because it is only likely to be mistaken for conditions also requiring early operation.

5. The patient is in a much better condition now to stand an operation than when weakened by suppuration and necrosis, which almost inevitably follow.

HAMILTON, ONTARIO.

FORTY YEARS AND AFTER—A REPLY TO DR. OSLER.*

BY JOHN FERGUSON, M.A., M.D.,
Senior Physician Toronto Western Hospital.

A short time ago I was asked by the President to read a paper on Dr. Osler's recent address at Johns Hopkins University. At first I declined, stating that some older and more experienced member should be chosen for the discharge of so important a task. The request was, however, renewed, and this is my excuse for appearing before you on this occasion.

I.—Dr. Osler's Position.

"I have two fixed ideas well known to my friends. The first is the comparative uselessness of men above forty years. This may seem shocking, and yet, read aright, the world's history bears out the statement. Take the sum of human achievement in action, in science, in art, in literature, subtract the work of the men above forty, and while we should miss great treasures —even priceless treasures—we would practically be where we are to-day.

"It is difficult to name a great and far-reaching conquest of the mind which has not been given to the world by a man on whose back the sun was still shining. The effective, moving, vitalizing work of the world is done between the ages of twenty-five and forty, those fifteen golden years of plenty, the anabolic or constructive period, in which there is always a balance in the mental bank, and the credit is still good.

"In the science and art of medicine there has not been an advance of the first rank which has not been initiated by young, or comparatively young, men. Vesalius, Harvey, Hunter Bichat, Laennec, Virchow, Lister, Koch—the green years were yet upon their heads when their epoch-making studies were made. To modify an old saying, a man is sane morally at thirty, rich mentally at forty, wise spiritually at fifty, or never. The young men should be encouraged, and afforded every possible chance to show what is in them.

"My second fixed idea is the uselessness of men above sixty years of age, and the incalculable benefit it would be in commercial, political and professional life, if, as a matter of course, men stopped work at this age. In that charming novel, 'The Fixed Period,' Anthony Trollope discusses the practical advan-

* Read at the Toronto Medical Society, 16th March, 1905.

tages in modern life of a return to this ancient usage, and the plot hinges on the admirable scheme of a college into which at sixty, men retired for a year of contemplation before a peaceful departure by chloroform.

"As it can be maintained that all the great advances have come from men under forty, so the history of the world shows that a very large proportion of the evils may be traced to the sexagenarians, nearly all the great mistakes, politically and socially, all of the worst poems, most of the bad pictures, a majority of the bad novels, not a few of the bad sermons and speeches."

Subsequently, Dr. Osler remarked as follows:

"Nothing in the criticism has shaken my conviction that the telling work of the world has been done, and is done, by men under forty years of age. The exceptions which have been given only illustrate the rule.

"It would be for the general good if men at sixty were relieved from active work. We would miss the energies of some younger-old men, but on the whole it would be of greatest service to the sexagenarians themselves.

"I said that man's best work was done before forty, and at sixty he should retire."

"No man ought to think of writing a book until he is forty. Up to that time he should be engaged upon other and more important things, creating what he intends to write about. That's the way it was with me. I was too busy at forty to write."

"Take Darwin as an instance. His greatest work was done when he was a young man exploring South America."

II.—Opinions Regarding Dr. Osler's Views.

The London *Globe* remarks that "Dr. Osler's views are disproved by the patent fact that a very large proportion of the men who are doing the best work in the world to-day are over sixty years of age."

The *St. James' Gazette* says: "We know several men over sixty who will refuse to discuss it, yet five years offer such an opportunity for argument that Dr. Osler may be able in 1910 to die a martyr to his own cause."

President James B. Angell, of the University of Michigan, does not subscribe to the statement that men lose their usefulness when they reach the age of sixty years.

Dr. Henry M. Hurd, President of Johns Hopkins University, says:

"It was natural that in making an excuse for leaving Johns Hopkins and going to Oxford he should say that he felt that

his work for the university had been finished, and that some one should come to take his place—but there he should have stopped.

"I have known Dr. Osler so long that I have become accustomed to his views. When I first met him some sixteen years ago I was not in the first blush of youth. At that time Dr. Osler was not quite forty, and he said that he thought a man's work should cease at forty. After a few years he said no man should attempt to do anything after he had reached fifty. Now that he has passed fifty he says that sixty is the limit, and I venture to say that within a few years he will declare that seventy is not a bad time to quit.

"Many of us feel that the address was unfortunate. It is safe to say that when man reaches the limit, and not until then, he advertises the fact by poor work."

"Cato learned Greek at eighty, Sophocles
Wrote his grand 'Œdipus' and Simonides
Bore off the prize of verse from his compeers
When each had numbered more than fourscore years.
And Theophratus, at fourscore and ten,
Had but begun his 'Characters of Men.'
Chaucer, at Woodstock, with his nightingales,
At sixty wrote the 'Canterbury Tales.'
Goethe, at Weimar, toiling to the last,
Completed 'Faust' when eighty years had passed.
Something remains for us to do or dare;
Even the oldest tree some fruit may bear,
For age is opportunity no less
Than youth itself, though in another dress."

In this fashion did Longfellow anticipate and refute the paradox put forward that men should be laid upon the shelf at the age of sixty.

S. E. Kiser, in the *Chicago Record*, among other things says:

"There's poor old Tolstoi; how unwise and mean his actions are
Compared with those of Nicholas, the glorious young Czar!
How grand the world might be to-day if Gladstone, Tennyson,
Grim Bismarck and great Hugo all had died at forty-one!"

Lord Macaulay said in the House of Commons in 1841: "It is the law of our nature that the mind shall attain its full power by slow degrees; and this is especially true of the most vigorous minds. It would be impossible to name any writer of the first order whose juvenile performances were his best. That all the most valuable books of history, of philology, of physical and metaphysical science, of divinity, of political economy, have been produced by men of mature years, will hardly be disputed. The case may not be quite so clear as respects works of the imagination. And yet I know no work of the imagination of

the very highest class that was ever, in any age or country, produced by a man under thirty-five. Whatsoever powers a youth may have received from nature, it is impossible that his taste and judgment can be ripe, that his mind can be richly stored with images, that he can have observed the vicissitude of life, that he can have studied the nicer shades of character. On the whole, I believe that I may, without fear of contradiction, affirm this, that of the good books now extant in the world more than nineteen-twentieths were published after the writers had attained the age of forty."

The *British Medical Journal* of recent date editorially remarks: "Professor Osler's statement that all the best intellectual work is done by men under forty is not by any means borne out by facts. To Dr. Osler's dogmatic assertion we oppose the above equally positive statement by Macaulay, an oracle of at least equal authority. This is in accord with the fact—which can scarcely be denied except by those who love paradox more than sober truth—that the intellectual powers do not reach the stable equilibrium of full and harmonious development till the age of forty or even later."

Victor Hugo, no mean mind, said that "Forty was the old age of youth and fifty the youth of old age."

The *Medical Age* makes the following comment on the matter: "If Professor Osler cannot give us a 'de Senectute' gospel more elevating than that which would decree the old man's insufficiency to be measured by Dr. Osler's conceptions of utility, he had better not have delivered his message."

While making the above quotations I am not forgetful of the fact that Goethe said we get no new ideas after forty, and that Vierordt says the brain attains its maximum weight at twenty. But it should be borne in mind that Goethe's whole life disproved his own theory, and that there is a vast difference between brain weight and brain development.

III.—Scientifically Considered.

It must, of course, be conceded to Dr. Osler that as no one can live on indefinitely, a period of decline of intellectual and artistic power must sooner or later set in. His error is in fixing the meridian of creative life too early. If he will give this matter more attention from the pathological standpoint, and cease to depend on statistics which may appear to prove anything while establishing nothing, he will probably add ten or even twenty years to the span of creative activity; he may even see cause to prolong it to the proverbial threescore and ten. It is not safe to set definite limits to the capacity for development. That of the mind may go on long after the body has

ceased to grow, and may still go on while the physical powers are in steady decline. The objects that interest the artist may vary, and his point of view and method of treatment may change, but all this is quite compatible with increasing excellence of artistic product till a period of life far beyond the limit arbitrarily and hurtfully set by Dr. Osler.

The truth probably is that whatever decay in creative power becomes a noticeable concomitant of advancing age is due not to the advance of age so much as to wrong habits of life. Dr. Osler, as a pathologist, knows perfectly well that the vast majority of people, even those who think themselves all right, are in a pathological, not a physiogical, condition. So long as they injure themselves by over-indulging in eating, drinking, sleeping and the use of stimulants and narcotics, it is mischievously unfair to attribute to the infirmity of age the decay that is really due to suicidal practices. The wonder in regard to most persons should be not that they survive with decaying powers, but that they survive at all. For those who persist in living to eat, drinking to enjoy, sleeping to enervate and using whiskey or tobacco to exhilarate or narcotize, curtailment of creative power is inevitable at any age, and if the impairment becomes more noticeable after the meridian of life is past, that is largely because the mischievous habits have been longer practiced. Some constitutions can stand more bad treatment than others, but none can escape a check in development, even though loss of power may not be positively predicable.

Dr. Osler is much too careful a scientist to seriously pretend that age is the true measure of existence. The standard is arbitrary, and to group men according to the number of years they have been in the world is no more scientific than to group them according to their weight, or their height, or to reckon the world's progress by centuries. Doctors themselves discovered this long ago, and set up the arterial standard. "Man is as old as his arteries," they said. In our everyday wisdom we have the proverb, "A man is as old as he feels, a woman as old as she looks." We hear much about "young old men," and "old young men," paradoxes well understood. Dr. Osler is aware of this, and also of the famous poetical passage which tells us that life is not measured by years, but by deeds and thoughts, and aspirations. This is sound science and good poetry.

But it seems to us that the radical fallacy of Dr. Osler's doctrine is shown by something that he looks upon as confirming it. He holds that up to the age of forty a man should devote himself to acquiring knowledge as to matters of fact, and that not until after that age should he attempt to generalize. Observation, then, according to him, is the proper pursuit of a man at the height of his powers, while deduction

is allowable only when he has begun to degenerate; in other words, the acquisition of knowledge calls for mental powers superior to those that suffice for systematizing that knowledge and employing it as a basis for teaching and for the formation of theories. The senses, in other words, are higher than the intellect. There are some of us who think it a higher intellectual function to make the best possible use of recorded observations than to do actual laboratory work. From this point of view and from that of their tendency to discourage middle-aged men, we think that some of his remarks are to be regretted.

It is a well-known fact that the mind and the body do not always develop simultaneously. Nestor complained that the gods do not bestow the wisdom of years until they have withdrawn the vigor of youth. Along this line there are many exceptions, however, that in a hundred examples, probably forty-five would contradict the evidence offered by the other fifty-five. We can well imagine some one urging that 51 per cent. constitutes a rule, and that 49 per cent. must be reckoned as an exception. Failing to dislodge him from this position, we might be obliged to admit that fifty-one out of every hundred men are declining at forty and becoming of reduced economical use at sixty.

There are marked differences as to the age at which people attain their mental development. Gladstone, Carlyle, Weierstrass are instances of the highest types of mental development coming late. They ripened slowly, but remained at their prime a long time. The meaning of this is plain. Some men are at their best at thirty, some at forty, some at fifty, some at sixty and over. And it is not hard to find a reason for this. The laws of heredity and the environments of any person make for great differences in his vigor, development and longevity. Social conditions also play an important role in a man's life-history. Furthermore, we must not forget the remarkable influence of opportunity or circumstances. The country churchyard may contain mute Miltons and unknown Cromwells. Oyama's day came because of Russia's wrongful aggressiveness. So in the world of arts, science and letters the finest fruits may not be borne until late in the autumn, because, figuratively, of an unfavorable spring or summer.

IV.—Practically Considered.

There is one aspect of Dr. Osler's address that merits attention and praise, namely, the credit he gives young men for what they are doing and the encouragement thrown out by him to inspire them to even greater achievements. He has always been

pre-eminently the young man's friend, and has done much to discover and bring forward many a bright young man. In this regard Dr. Osler's work will remain a precious legacy long after he has gone. A man's influence over others is sometimes of far greater moment than anything he may actually do himself.

With regard to old men, however, the case is different. There are hundreds of thousands of men in America at and beyond the sixty year period who are still in active life and forced to remain there by inexorable circumstances. Many of them have to fight to keep their place in the ranks and prevent themselves from being crushed to the wall. They feel that it is a cruel fate that requires even greater exertion of them at a time when they are less able than in early manhood to work. Several men of this class, reading the distorted view presented by Dr. Osler's words, have committed suicide, the connection between their action and the doctor's address being shown by press clippings. Such a case was that of an aged scientist in St. Louis recently, who chloroformed himself after discussing the whole question of the uselessness of old men. Dr. Osler would, we feel sure, be the last person in the world to make more difficult the task of the old man in factory and workshop or at the clerk's desk toiling for bread for himself and his loved ones. We cannot all retire at sixty. Wisdom comes with age. The old man has earned the right to continue to earn his living. An opinion coming from a physician of such high standing as Dr. Osler is bound to carry much weight with it.

Since David wrote the Psalms the world has passed through the greatest struggles for existence in its history, and every day the struggle is growing more intense. Medical science may be able to lengthen a man's years, but industrial competition is surely pushing the hands of the clock ahead on the dial of a man's career. The men who, like Gladstone, develop late in life, find the struggle fiercest in their youth; the men who develop early, and these are a majority, find it in advancing years. In this respect it may be that Dr. Osler's words have done much harm; for while he spoke as a humanitarian that men of sixty should retire, it may only have the effect of making it still more difficult for the old man to keep his place in the stern struggle for an existence, and thereby add another burden to those brought to him already by reason of his years.

V.—Historically Considered.

The world will ever marvel at the remembrance of Gladstone's fight for Home Rule in Ireland after he had passed eighty, of von Moltke's crushing victories against Austria when he was a sexagenarian, and against France when he was a

septuagenarian. Bismarck was fifty-two when he organized the North German Confederation, fifty-six when he saw its culmination of success with the crowning of the King of Prussia as German Emperor, and seventy-five when he resigned the reins of power.

Johan Kepler was fifty-nine years of age when he announced his discovery of the distance from the planets to the sun; Bacon was fifty-nine when he published "Novum Organum"; Gassendi was fifty-eight years old when he published his atomic theory, and Newton was forty-four when he published his law of gravitation, and older when he wrote his Principia.

Dealing with the rather surprising claim that if the work of men more than forty was subtracted from the world's record we should be practically where we are, let us give a few contradictory examples. Among statesmen, Gladstone, Bismarck, Palmerston, Salisbury, Chamberlain, Burke, Chatham, Washington, Peel, Grey, Lincoln, and Sir John Macdonald were more than forty when their greatest work was done. Cæsar, Cromwell, von Moltke, Lee, Grant, Marlborough, Nelson, Wellington, Blucher, Farragut, Roberts, Campbell, Kitchener, Nogi, Kuroki, Togo, Nodzu and Oyama are warriors in this category. The same is true of Shakespeare, Milton, Goethe, Carlyle, Dryden, Scott, Voltaire, Flaubert, Newman, Macaulay, Gibbon, Tennyson and Hallam among great writers; while among scientists we might name Spencer, Darwin, Newton, Jenner, Faraday, Avebury, Galileo, Tycho Brahe, Fulton, Kepler, Brewster, Copernicus, Huxley, Humboldt and Kelvin as falling beyond the comparatively useless line. Columbus was fifty-six years old when he discovered this continent, and Washington fifty-seven when he became President. Captain James C. Cook met with an untimely death at the age of fifty-one while conducting his third voyage of discovery among the Pacific Islands.

If we may accept Scriptural testimony in a purely scientific discussion, we know that in the days of the prophets there were many men who lived to an extreme old age, and whose natural strength was not abated. Some thousands of years later, the Psalmist said, "The years of a man's life are threescore and ten." We have some reason to understand that he meant the useful years. At the present moment great events are transpiring in the Far East. The leaders of Japan, the Emperor, Marquis Ito, Admirals Togo and Kamimura, Marshal Oyama, and Generals Nogi, Kuroki and Nodzu, nine in all, average sixty-one years. These men are brilliant in a very high degree, both in initiating plans and in carrying them to successful completion.

We do not believe that Dr. Osler is correct in this matter, and are quite sure that the examples of the medical men he

adduced as illustrating the tenability of his position do not bear him out in the least. When we recall the tremendous importance commonly attached to the work done by Virchow up almost to the very end of his long life, we cannot admit that it illustrates such a belief. As for Bichat, it is true that he did his work while he was young, for at thirty-one he died, and we shall never know what he might have accomplished had he lived to old age. Harvey was born in 1578 and published his work, "Exercitatio de Motu Cordis et Sanguinis," in 1628 when he was fifty years old. Lister was born in 1827, and was close on to fifty years of age when he began to convert the medical world to the principles of antiseptic surgery; and while Koch was born in 1843, and was within one year of forty when he discovered the tubercle bacillus, even the least appreciative of his admirers will admit that he has done some good work since 1882.

Darwin published his "Origin of Species" at fifty, and his work on moulds at seventy-two, the year before his death. John Hunter was sixty-five when he died. He rose from a meeting in St. George's Hospital and died suddenly of angina, from which he had suffered for twenty years. The last twenty years of his life were very active ones. All these added to the sum of human achievement long after they had passed the dead line of forty years old. Dr. Osler published his first medical book when he was forty years old, and Dr. George M. Gould, the accomplished editor of *American Medicine*, did not enter the medical ranks until he was forty years of age. Andreas Vasalius died at fifty; thus his brilliant career was cut short, and much that he might have done has been lost to the world. His great work, however, was accomplished in his last ten years. Laennec, the distinguished physician, pathologist, anatomist and inventor of the stethoscope, died at the young age of forty-five. And after death "no man worketh."

It is difficult to try to refute by statistics of greatness or of genius that he is wrong, because when examples of the manifestation of artistic power in advanced age are cited it is open to him to answer, at least plausibly, that the exception proves the rule. In spite of the multiplication of such instances he may still be able to assert that for all practical purposes the creative activity belongs to the period before forty, even when its manifestations are delayed till after that period of life.

One rejoinder to this would be that in case of the great poets like Shakespeare, Goethe, Browning and Tennyson—and poetry is perhaps the supreme criterion by which to test the theory—their best work was not done before forty, but after it, and that it continued to improve as to the higher qualities so long as they continued to write. No competent critic would

postpone Shakespeare's "Tempest," written when he was nearly fifty, to any of his earlier productions as a work of creative genius; or prefer "Locksley Hall" to "Locksley Hall Sixty Years After." Shakespeare, greatest of all literary artists, voluntarily ceased writing at forty-nine; but there is no reason to doubt his work would have continued to improve with experience and practice if he had chosen to continue it for another twenty years of healthful life. The same statement, *mutatis mutandis*, would hold good of the great historians, the great scientists, and the great philosophers. In short, it is impossible for Dr. Osler to establish by any induction, however wide, that his theory is even presumptively sound. Longfellow when old wrote his "Morituri Salutamus," from which we have quoted and which is regarded as equal in merit and popularity to anything he wrote in his youth. The greatest of all Browning's poems, "The Ring and the Book," was published when he was in the sixth decade, and some of his most characteristic verse was produced in his eighth. Tennyson's rich and tender insight into the spiritual life of the soul was with him still as an octogenarian, notably in that exquisite lyric, "Crossing the Bar," in that wonderful dramatic idyl, "Rizpah." Then there is Milton at sixty completing his "Paradise." If Carlyle had died at forty, we would only have some essays and "Sartor Resartus" to know him by, as most of his essays, "Heroes and Hero Worship," "The French Revolution," "Cromwell," "Frederick the Great," and "Past and Present" were written between forty-five and seventy.

Dr. Johnson conducted the Rambler, the Adventurer, and the Idler from the fiftieth to the sixtieth year of age. His dictionary was published when fifty-five, a phenomenal task in his day; when seventy-five he made his trip to the Hebrides, and when seventy-seven published his master-work, "The Lives of British Poets." Adam Smith gave to the world his "Wealth of Nations" when fifty-three, and continued for many years to do excellent work.

Kant began the study of his immortal work, the "Kritik der reinen Vernunft," when fifty, and published it when fifty-seven. He brought out a second edition when sixty-three.

John Locke, the physician philosopher, wrote his essay on the Human Understanding between fifty and fifty-eight.

The two physicians and the three surgeons who attended the King when operated upon for his attack of appendicitis varied in age from fifty to seventy-five, averaging over fifty-eight, and were all actively engaged in professional or state duties.

Lord Howard, Sir Francis Drake, Sir John Hawkins, Sir Martin Frobisher, Sir Walter Raleigh, and Sir Richard Grenville, the six men who commanded the English fleet against

the Spanish Armada, varied in age from thirty-six to sixty-eight, making an average of fifty-one. They all continued to render great services to their country for many years afterwards.

But why extend the list of names? Such works as the Encyclopedia Britannica, Dictionaries of Biography, "The English Men of Letters" series, "The Eminent Statesmen" series, Plutarch's Lives, etc., yield not hundreds but thousands of instances of men at fifty, sixty, seventy, and even eighty, performing great tasks and doing splendid work.

I have examined somewhat carefully the achievements of about 500 distinguished poets, historians, critics, mathematicians, scientists, explorers, warriors, statesmen, inventors, orators of many countries and of different periods from the dawn of history down to the present, and find that about seventy-five per cent. of their best work was given to the world after forty years of age. In coming to this conclusion I take it that the mental operations of Galileo, Brahe and Kepler on the laws of astronomy, of Kant in writing his Kritik, of Smith in composing his "Wealth of Nations," of Wellington at Waterloo, of Kelvin in laying the Atlantic Cable, of Roberts in South Africa, of Salisbury as Premier of Britain, of Darwin formulating the origin of species, of Pasteur in his laboratory, of Lister preaching antiseptic surgery, of Treves at the bedside of the King, are not less important or valuable than their studies and trainings which laid the foundation for these achievements; and I think the consensus of opinion is with me.

Selected Articles.

THE COMBINED TREATMENT IN DISEASE OF THE EYE, ESPECIALLY IN THAT OF THE UVEAL TRACT.

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My remarks will be directed to the treatment of various diseases of the eye, and but incidentally to other conditions. By my combined treatment I mean the internal administration of mercury and the iodid of potassium associated with the hypodermic injection of pilocarpin.

The details of this treatment have been given in previously published articles, and hence are not going to be referred to in this paper. Moreover, let me mention that I have been using, and most closely observing the effects of, this treatment for a full fifteen years.

The reason of the radical nature of its influence appears to be as follows: It stimulates the nerve centres to a remarkable degree, and through them the ordinary physiologic processes of the affected part or parts especially are aroused to an activity far in excess of the normal, and thus the diseased condition is acted upon and removed. And, moreover, this hyperactivity can be regulated and sustained for years if necessary by the manner in which the combined treatment is administered.

I shall now place before you a certain number of clinical facts for your consideration, and shall begin by giving succinctly an account of two cases of sympathetic ophthalmia in quite different stages of the disease. In September, 1900, I read a paper before the Canadian Medical Association at Ottawa upon the successful treatment of one case of very severe sclero-keratitis in a patient with a tuberculous history, and of another of acute sympathetic ophthalmia. The report of this case of sympathetic ophthalmia was incomplete, and was given comparatively early in the treatment of the disease, in that I had gone far enough to warrant me in feeling that this combined treatment was capable of exercising a marked controlling and curative influence upon this disease. I shall give this case as fully as time will permit.

It is that of a boy, aged 12 years, referred to me at the time of the injury by Dr. Stevenson, Toronto, suffering from acute sympathetic ophthalmia, that is, a very severe cyclo-irido-keratitis.

When the sympathetic trouble, which showed itself rapidly and suddenly three months after the injury, was first noticed, the other eye, which had been injured by a penetrating wound extending well up into the cornea from just at the ciliary region, was excised, the date being Jan. 25, 1900.

Under atropin, the pupil became at once fully dilated. Mercury and the iodid of potassium were given. The eye at first improved. On February 2, eight days after the excision, the sympathetic inflammation plainly showed itself. I now began my combined treatment. Of the first twelve injections of pilocarpin, that is, the first two weeks, the effect was not full, though I gave as much as one-sixth of a grain at each injection. Though there was apparently no noticeable constitutional effect of the atropin, and only a very slight and temporary dryness of the throat, by careful pressure upon the canaliculi, all passage of it into the throat was stopped, and then the one-tenth of a grain gave a full effect, whereas previously one-sixth of a grain did not. This latter under normal conditions is much too large a dose for a child 12 years old.

The pupil was now, at the end of three weeks, only one-third dilated, the exudation into the tissue of the iris and ciliary processes causing the narrowing to take place. The margin of the pupil was very firmly bound down, and the capsule of the lens in the pupillary area was covered with a coating of lymph.

On the 24th, four weeks since the excision, and about three weeks since the beginning of the combined treatment, another acute attack came on. There was much general infection, tension +1, severe pain, and keratitis punctata over the whole cornea; in fact, a well-developed condition of acute sympathetic cyclo-irido-keratitis. The vision was perception of light only. On February 27 the eye was quieter, tension +-. On March 20 the eye was still improving and the vision was better. The combined treatment was still kept up, and the eye was doing well till March 23, when there occurred a very acute exacerbation with severe pain, the tension +1, and the vision perception of light only.

On March 31 the eye was better. Between this date—March 31—and the beginning of September, 1900, the combined treatment was used. An improvement, which was most uniform, thorough and unbroken by any symptom of relapse resulted. The sight also gradually improved till September, 1900, the vision was 10/20 less two letters. The posterior synechiæ have been almost completely removed; but the pupil is dilating very slowly, due to the exudation still present in the iris tissue. The tension is normal. Up to this time the boy had taken internally 5 grains of iodid of potassium, thrice daily, and one twenty-fourth of a grain of bichlorid of mercury. One-tenth

of a grain of pilocarpin was injected every second day after the first two weeks for five months continuously. During the remainder of the eight months, at the end of every two weeks, I have given an injection every second day for six injections. His general health is good.

This is a shortened account of the case I read September, 1900.

In this description of the case I gave no account whatever of the fundus, for I could not see its details, so hazy was it by reason of the deposit of lymph on the anterior capsule of the lens. Just after the sympathetic ophthalmia began, the optic disc showed on ophthalmic examination a normal appearance save a uniformly infected look. The media quickly becoming hazy prevented any subsequent examination till the present one.

Later on, in the autumn of 1900, my ophthalmic examination showed a fundus apparently healthy, but a very peculiar looking optic disc. However, so hampered was I by the lymph that I could make out no reliable details. Early in 1901 I got a better view of the fundus, and now was able to look at a disc unlike any I had previously seen.

The optic disc was covered by an exudate abruptly limited to it, and not extending in the slightest degree into the surrounding tissue. This exudation gave to the disc the appearance of being covered with a dense, dull, whitish deposit, resembling closely the dull, white color of putty. The only sign of vessels was a most minute red line, just traceable, running vertically up and down; but at the centre of the disc no trace of one. Away in the outer field close to the ciliary processes were a few spots of choroido-retinitis.

About one year later the exudate was so lessened that the larger vessels could be plainly distinguished and a few capillaries could be seen.

Again, one year later the process of removal was going on so satisfactorily that now many more vessels could be made out, and the margin of the optic disc was quite ragged looking. In the beginning of 1904 the process of removal was still being continued, and now the capillaries were becoming quite numerous and the vessels at the centre of the disc much less covered by deposit. The spots of choroido-retinitis were being removed, leaving only disturbed pigment to mark their places. Atropin, a 4-grain solution, had been uninterruptedly used from January, 1900, up to February, 1904. Then it was stopped, and the pupil contracted to one-third normal size. At first, it was a little eccentric, but later quite central and fairly active. The cornea is now quite clear, and has been so for some length of time. The anterior chamber is quite normal, and also

the tension, as it has been ever since September, 1900. The capsule of the lens still has a flaky, opaque look in places with quite clear spaces between. This exudate is still undergoing removal. There is a marked contrast between the white color of the disc and the vessels; that is, there is an absence of the natural lustre and color of the disc, though it is for all practical purposes normal as to its function. The vision is with the myopic correction of —1 sph. ⌒ —.50 cyl., 20/20 or 6/6, and Ji easily and comfortably.

The mercury and the iodid of potassium have been regularly given save now and then a short intermission. The hypodermic injections of pilocarpin have been continued.

During 1901 a series of six injections was given—one every alternate day—and after an interval of two weeks was again repeated. During the year 1902 the same course was pursued, save the interval was made three weeks. In the year 1903 the interval was lengthened to four weeks. In 1904 I have given the six injections—one every day—and the interval has been six weeks. The treatment of this case of sympathetic ophthalmia is still being continued and shall be till the pupil becomes normal as to its size and activity. This may necessitate six to twelve months' longer use of the remedies.

Two months is the greatest interval that can be allowed between a series of injections; for if this be exceeded no progress is made. This is my opinion, founded upon clinical experience.

Since September, 1900, the improvement has been steady, unbroken by the faintest sign of any relapse or irritative process, and this improvement has been equally marked in every part of the eye. The boy is strong and healthy and growing rapidly.

The second case is William M., aged 49 years, who first consulted Dr. Trow, Feb. 19, 1898. I then saw him in consultation with Dr. Trow, who is a colleague of mine, at the Eye and Ear Infirmary and General Hospital, Toronto.

The left, the injured eye, was a shrunken, lost globe from an injury, July 22, 1897. On Dec. 2, 1897, the right eye became affected and was quickly highly inflamed, associated with an agonizing pain. The man said that for four days there was no p. l., then atropin was used and the eye became quieter, only again to be similarly attacked two weeks later. The sight did not again return. The condition of the eye at this consultation was p. l. very feeble, indeed, tension decidedly minus, pupil occluded and excluded and iris tissue filled with exudate.

We both looked upon the right eye as being in such a desperate state that the question of treatment seemed only a forlorn hope. However, we decided to use the combined treatment. I did not then have the same experience as I now

possess, or I am certain I should have urged the use of the treatment with good hopes of success. The treatment was energetically given from February, 1898, to October, 1898, a period of eight months. The result was that the attacks of inflammation ceased and the eye became quiet. In November an iridectomy was tried and failed. Influenza now attacked him, and he was not again under observation till February, 1899.

The condition of the eye was now so favorable that the lens was removed. In April a DeWecker's scissors operation was done, resulting in a good pupil. The optic disc was atrophic in appearance, with vessels smaller than normal. After the operation the man returned home, a distance of 1,500 miles, and was not again seen till August, 1900, a period of fifteen months. During a greater part of this time he took strychnin internally. In September, 1900, the vision of the right eye was with +11 sph. $\frown$ + 250 cyl. ax. 110 = 20/30 and on adding +3 sp. was Ji easily.

In June, 1904, that is, almost four years since the above date, in a letter received from him written by himself, he says his vision is in every way as good as in September, 1900.

Now, with your permission, I shall give most briefly the history of a few test cases of other diseases of the eye in which it has been used.

A man, aged 45 years, who consulted me, was almost a cripple from chronic articular rheumatism; vision of each eye very poor; a most marked and broad calcareous band stretching almost completely across the cornea of each eye. He had been under treatment for several years, with the most approved of methods, without any avail, when he consulted me for the first time in 1890. Under my combined treatment, at the end of four years his condition was as follows: So complete a disappearance of the rheumatism that he could run up and down long ladders with security and ease; a slight nebulous haze of each cornea had taken the place of the calcareous degeneration; the vision was 20/50, and he could read with ease, whereas at the beginning he could not read at all. To-day, ten years later, his condition is equally as satisfactory, and no relapses have occurred.

Another man, a case of acquired syphilitic-cyclo-iritis of one year's duration, had been under treatment with atropin drops, mercury and the iodid of potassium, which had apparently exercised no curative effect; for the condition of each eye was as follows: Vision counting fingers only; constantly recurring attacks of inflammation, the exudate most copious, giving a pupil almost occluded and excluded and the lymph apparently well organized. One and one half years of the use of the combined treatment resulted as follows: Vision of one eye, 6/12, or

20/40, and of the other, 6/6, or 20/20. And, moreover, during this time no relapses had occurred.

In cases of hypopyon-kerato-iritis of the worst type, that is, with a large central ulcer, pus in the anterior chamber up to a level with the lower pupillary margin, and the pupillary margin well bound down with lymph, the use of the combined treatment has resulted in the complete recovery of the eye, with only a slight corneal haze to mark the position of the ulcer, and the pupil fully dilated and free of lymph.

I was once asked to see a case of iritis in a hospital patient who was suffering from a typical, diffuse scleroderma. This skin disease had been treated in every possible way for five years or more in various hospitals in the United States, with no beneficial effect. When I began my treatment he lay in bed stiff from his head to his feet, a most typical specimen of the advanced disease. Under the combined treatment for one and one-half years there was a most marked improvement, so that he was able to walk and use hands fairly well. He was discharged through unruly conduct and lost sight of. Also, it has acted beneficially in several forms of eczema, which were present in patients whose eyes were undergoing this treatment.

In a case of albuminuric neuroretinitis in a woman but lately confined, where the urine was scanty and almost all albuminous and the head pains severe, its use resulted as follows. At the end of three weeks a normal amount of urine was passed with a very small percentage of albumin, and a cessation of the headaches and a decided lessening of the neuroretinitis. The woman felt so well that she went home. The physician who called me in was very gratified; but when I wished to continue the treatment so as to produce a permanent effect by means of tissue change, he did not second my efforts. To him the relief was all that could be looked for or desired. This opinion of physicians can not be wondered at, when, in a well-known book upon the eye, there is a sentence as follows in regard to inflammation of the vitreous: "As in other vitreous changes, if the general condition permits it, a sweat cure may be tried, either by means of a Turkish bath or with jaborandi." In answer to this I beg to say that between the Turkish bath and the combined treatment there is no semblance in effect whatsoever. It shows most pointedly that the true action of the combined treatment had not been grasped; for sweating and ptyalism, *i.e.*, the profuse secretion of saliva, are only symptoms of the proper actions of the medicine, and intrinsically nothing more. The Turkish bath has never and could not produce the changes that pilocarpin and iodid of potassium and mercury have. The effect of the bath is very superficial; and in this combined treatment to heighten the perspiration either by the bath or

the drinking of hot water, and thereby to increase the effect of this treatment, is an altogether wrong conception. The minds of those who think thus are wholly taken up with the idea of relieving one organ by the increased activity of another. They do not connect with the combined treatment that which is its essential feature, viz., tissue change; whereas my use of the combined treatment in various diseases of the eye incidentally in disease of other organs, has shown to me emphatically its power to bring about radical change of tissue by restoring to health markedly diseased tissues.

In a case of cerebral syphilis, where I was called in consultation, the agony the man suffered was extreme, and no effort up to that time made had been able to alleviate it. However, under the combined treatment his life was made endurable; in fact, comparatively comfortable for the month or so he lived. In hyalitis, where other forms of treatment have failed, its use has given excellent and permanent results.

In many forms of choroido-retinitis, especially of the yellow-spot region, the effect has been very satisfactory and lasting. In many forms of acute iritis with posterior synechiæ and lymph in the pupillary area, where usually the acuteness of vision is permanently more or less impaired as the result of the ordinary treatment pursued, with the combined treatment a normal condition ensues; that is, a fully dilated pupil, the removal of lymph from the pupillary area and the restoration of normal vision. Especially do I consider it of decided value in gouty and rheumatic affections of the eye. In corneal nebula, specific or non-specific, the effect of the treatment has been excellent, resulting in a most decided visual improvement.

If these remarks regarding the favorable effect of this treatment apply to all parts of the eye, as I affirm they do, having, as it appears to me, proved it, then this treatment ought, of a surety, to be applicable to certain diseased conditions of other tissues and organs of the body.

In this paper I have given, of necessity, a very brief summary of the reasons of my great confidence in this form of treatment. This treatment seemed to open up so strong a possibility of being able successfully to cope with diseases of the eye, where previously failures had been the rule, that I was afraid at first that my belief in its unusual powers of healing might, after a time, prove to be misplaced. But after the combined treatment had been put to most severe and searching trials, it came out more firmly based than ever. Thus my confidence has grown, and I am now, and it appears to me rightly, firmly fixed in this belief, that it is this new use and grouping of old remedies which enable results to be brought about, satisfactory, far-reaching and permanent.

ASEPSIS IN THE ROTUNDA HOSPITAL, DUBLIN.

By E. HASTINGS TWEEDY, Master.

It is necessary before entering upon a review of the aseptic methods practised in the Rotunda Hospital to furnish a short description of the hospital itself, so as to enable those interested in the subject to form an estimate of the resources at the disposal of those who have the administration of this very old and important charity.

The hospital was erected in the year 1756, and in the hundred and fifty years that have elapsed since that date, it has structurally undergone little or no change.

It is a three-storied building, massively constructed of granite blocks, and possesses many architectural beauties. The ground floor is occupied by offices, nurses' dining hall, Master's and assistant-master's apartments, etc., while the upper two stories are in chief part given up to maternity wards; of these there are eight, four on each landing, as well as four small isolation rooms. Large, old-fashioned windows well provide for the hospital in respect to light and air, while to supplement these, circular gratings of wrought iron are placed over large apertures situate in the centre of each corridor; thus an up-current is carried from a large and airy hall through the building to be finally conveyed by means of an air shaft from the hospital through the roof.

A ward on either corridor has been divided into two, and the inner one of each of these is fitted with all the requirements of an aseptic, though inexpensive, delivery room. The outer compartments are used as waiting wards for women in an early stage of labor; until labor has begun no normal case is admitted into the hospital, but once in labor, any poor woman can enter either during day or night, without being asked to show a letter of recommendation or admission form.

On admission the woman obtains a bed-card which is filled in with certain necessary details of her history, and, if time then permits of it, she is given a warm bath, this including a very thorough washing and combing of the hair. The bath-rooms, lavatories and lift are all situate in the new gynecological wing of the hospital, erected some ten years ago, mainly through the exertions of Dr. W. J. Smyly, the then Master, to whose energies and ability we owe this and many other structural and administrative improvements.

The second stage of labor having commenced, the patient is placed on one of the couches in the delivery ward, and is taken charge of by a nurse and a student, or by two nurses. They palpate the abdomen, and write on the bed-card their diagnoses.

We find that this method procures more accurate results (and is easier to acquire) than those obtained by the vaginal examination; moreover it is free from the danger to the patient attending the latter procedure.

As ours is a teaching institution, however, vaginal examination is not neglected, and so permission is given to examine a woman four times throughout her entire labor; after each of these the diagnoses arrived at must be written on the card.

Before making an examination, the hands must be washed for four and a half minutes in a lift-up basin, to which hot and cold water is supplied by means of foot pedals; rinsed free from soap, they are then immersed in a 1 in 500 corrosive sublimate solution for a minute and a half, accurately timed by a sand glass placed on the wall.

There are certainly more efficient methods of disinfection than this, but I hesitate to employ them because of the great increase in expense that would be entailed by their use.

Safety, however, is obtained by other means, viz., the provision of rubber finger-stalls; these are boiled immediately before being used, and no examination is permitted without their employment; moreover all our operations are now undertaken with rubber gloves on the hands, and we believe that marked benefit has followed their use.

The vulva is washed by the nurse with soap and water, swabbed with aseptic tow wrung out of antiseptic solution; antiseptic tow is also placed between the labia, while the hands are being washed, to mitigate the danger of infecting the vagina with germs carried in from the vulva by the examining finger. It is hardly necessary to mention that all instruments required are boiled in soda solution immediately before being used. Great attention is paid to the repair of lacerations to the perineum, tears of half an inch being accounted of sufficient importance to stitch.

Normal deliveries are neither douched before, after, or during labor, nor is the placenta interfered with until the uterus by its unaided efforts has expelled it into the vagina. It is then expressed into a basin placed between the legs, a diaper is taken from a solution of corrosive sublimate in which it has remained for many hours, and placed whilst wet over the vulva; a binder is applied, and the patient having been lifted on to a trolley, is wheeled into the convalescent ward.

These wards are filled up with and emptied of patients in rotation; in this we endeavor to provide that the ward last emptied will remain so for a few days in order that it be thoroughly cleansed, aired, and disinfected with formalin vapor.

Each bed is numbered with a number corresponding to one painted on the wall, and neither it nor anything appertaining to that bed is permitted to be placed under any number other than its own. Thus the hand-basin, buttock-basin, mackintoshes, and night-chamber are all numbered, the result being that we can now control the spread of infection in a more complete manner than formerly, should occasion arise.

Until recently it was the custom to remove all diapers from the patient at the end of twenty-four hours, and to permit her to drain on to a draw-sheet for the remainder of her stay in hospital; we have changed this now, and instead apply sheets of Gamgee tissue rendered sterile by being well scorched at the fire immediately before use. These replace the wet diaper about two hours after delivery, and if not safer than the older plan, at least have the advantage of procuring greater comfort for the patient, and a greater degree of cleanliness in respect to the bed-linen.

One nurse has charge of three patients and their respective babies; the duties entail the thorough cleansing of the genitals night and morning. To carry out this a buttock-pan (special design) is placed beneath the patient, who is thoroughly washed with soap and water by means of sterile wipes, carried in a direction from the pubes towards the anus, the wipe being neither permitted to touch the soap or antiseptic solution after it has been applied to the skin, but thrown into the pan, and replaced by a fresh wipe. When all soap has been removed corrosive-sublimate solution 1 in 1000 is used in a similar manner, and the buttocks are then dried by a towel kept exclusively for this purpose, and renewed daily for each patient, the actual genitals not being permitted to be touched by this towel.

In the event of high temperature, or other symptoms of morbidity occurring, a forceps is employed by the nurse in holding the wipes which wash and disinfect the patient, a precaution which makes the nurse much less liable to spread infection.

It is now necessary to say a few words in description of our methods of sterilising trays, basins, and other utensils employed in the labor ward.

We are not possessed of means for obtaining disinfection of bulky articles by low-pressure steam; in the delivery room it would be very expensive and nearly impracticable to keep the large number of basins and trays continually required in a sufficiently clean state and ready at a moment's notice by a gas-boiling apparatus, and, accordingly, we have adopted the expedient of submerging them in a porcelain tank, in which 12 gallons of 1 in 6,000 biniodide of mercury solution is placed; in this they remain day and night, protected from dust particles

by a closely fitting cover, if not required for use. When wanted, they are raised from the solution and placed in an unwiped condition on to the instrument table, and before being again replaced in the solution, they are thoroughly well scrubbed. This bath remains unchanged till labor moves to the other corridor, then all mackintoshes belonging to the room are placed in the trough, and kept soaking there for 24 hours. At the expiration of this period the tank stopper is removed, and the entire fluid is permitted to flow over the cement floor.

A thorough scalding with hot water cleanses the trough, and it is left empty till this labor ward again reopens in its turn, as already mentioned.

Bed-chambers, buttock-pans, and hand-basins are cleansed and disinfected with antiseptic solution before and after use, experience having nevertheless taught us that this is not at all times reliable in procuring sterilisation, more especially of the outside of the vessel, and a consequent danger arises that a re-infection of sheets might possibly occur from the contamination of an infected bed-chamber. We now systematically boil all these immediately the patient has left and before a new occupant of the bed arrives.

In estimating the extent of our morbidity, an arbitrary temperature of 100·8° F. has been for years considered by us as the highest limit of normal temperature throughout the puerperium.

It has been proved abundantly during the last year that as an indication of morbidity this is entirely unreliable, and if strictly adhered to in practice would lead to unjustifiable delay in our efforts to abort the septic condition. We now consider a temperature rising after the first 24 hours and remaining above 99° F. for two consecutive days as an indication of morbidity, provided it is accompanied by a pulse-rate of over 89 per minute. If temperature and pulse rise markedly, we do not wait for the two-day indication.

Our morbidity table shows an apparent increase in consequence of this departure, but it works altogether for the advantage of the patient.

When signs of sepsis develop the woman is carefully examined for an ascertainable cause; if suspicion is directed to the parturient canal, a vaginal douche is administered (a culture for microscopical examination having been first taken), and a purgative being administered, the patient's bed is raised on blocks to promote free drainage. If symptoms persist on the following day, the vagina is again douched out, a Ferguson's speculum inserted, and the cervix wiped dry with sterile wool, then a sterile glass tube suitably curved is passed into the uterus, and its contents are aspirated into the tube, by means of an

affixed syringe. The tube is next closed by sealing wax at either end, and sent down to the pathological department for bacteriological examination and report of its contents. The uterus is now douched with salt and water, peroxide of hydrogen, or cyllin solution according to the predilection of that assistant-master whose duty it may be to perform the operation.

If symptoms have not abated within 24 hours, the patient is removed, with her mattress and all her belongings, to a small isolation ward, where she is taken charge of by a special nurse, and the uterus is again douched. If the bacteriological report has been productive of positive results, the inside of the uterus is explored by means of a gloved forefinger in order that pieces of retained placenta, membranes, or old blood clot may be removed if present.

For our bacteriological laboratory and its fittings, we are indebted to my predecessor, Dr. Dancer Purefoy, who generously presented it to the hospital at a personal cost of £300.

There is nothing more remarkable in the history of the Rotunda Hospital than the steady and rapid increase of deliveries which has taken place within the last ten years.

The increase now amounts to nearly 500 per annum in the intern maternity alone; 205 women were delivered in the wards of the hospital during the month of May last year, and it can easily be understood how difficult the task became of attending in an aseptic manner so large a number of women.

The authorities of the hospital, acting with commendable foresight, have determined on a scheme to enlarge the hospital, so as to still further ensure the safety of our patients.

There are many points in this brief narration of our aseptic methods that may strike those reading this paper as cumbrous, or perhaps altogether unnecessary. My reply to such criticism is that each step described has been necessitated and evolved gradually in the systematic stamping out of serious morbidity.

Our claim to public recognition is, not that we are superior in asepsis to other well-managed institutions, but rather that we carry out our two great objects, the charity of a maternity and gynecological hospital, and of an important teaching centre, in a satisfactory and uniquely economical manner. — *The Practitioner.*

MEDICAL PIONEERS.

Puerperal Fever.

Childbed fever was a mystery to our professional forefathers. The general opinion was expressed in the otiose finding of the British jury, "Died by the visitation of God." Here and there, indeed, a shrewder guess was made as to the nature of the disease. In 1795, Gordon of Aberdeen wrote:

"I arrived at that certainty on the matter that I could venture to foretell what women would be affected with the disease upon hearing by what midwife they were delivered."

Rigby taught the same doctrine, but these were voices crying out in the wilderness. To the poet-philosopher, Oliver Wendell Holmes, belongs the glory of having first demonstrated that puerperal fever was not a product of some vague "miasm" or of want of ventilation, but a specific poison conveyed from one patient to another. A short account of the facts of his life was given in *The Practitioner* of January, 1901. In the history of medicine his name will live by his essay on "The Contagiousness of Puerperal Fever" read before the Boston Society for Medical Improvement in 1842, and published in a short-lived medical journal entitled *The New England Quarterly Journal of Medicine;* it was reissued unaltered as a monograph under the title, "Puerperal Fever as a Private Pestilence," in 1855. In that essay, Holmes presented well-digested facts, showing that the disease occurred epidemically and could always be traced to a definite source of infection. As an example of the sort of evidence which he collected, and also as an illustration of the midwifery practice of the time, may be cited the following account given by a physician of an outbreak which occurred in his practice:

"The time to which you allude was in 1830. The first case was in February, during a very cold time. She was confined the 4th and died the 12th. Between the 10th and 28th of this month I attended six women in labor all of whom did well except the last, as also two who were confined March 1st and 5th. Mrs. E., confined February 28th, sickened and died March 8th. The next day, 9th, I inspected the body, and the night after attended a lady, Mrs. B., who sickened and died 16th. The 10th I attended another, Mrs. G., who sickened but recovered. March 16th, I went from Mrs. G.'s room to attend a Mrs. H., who sickened and died 21st. The 17th I inspected Mrs. B. On the 19th I went directly from Mrs. H.'s room to attend another lady, Mrs. G., who also sickened and died 22nd."

Speaking of the evidence brought forward by him, Holmes says: "No negative facts, no passing opinions, be they what they may or whose they may, can form any answer to the

series of cases now within the reach of all who choose to explore the records of medical science." The following passage shows the intensity of the human feeling which animated his scientific researches: 'It is as a lesson rather than as a reproach that I call up the memory of these irreparable errors and wrongs. No tongue can tell the heart-breaking calamities they have caused; they have closed the eyes just opened upon a new world of life and happiness; they have bowed the strength of manhood into the dust; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it with less cruelty the death of its dying parent. There is no tone deep enough for record, and no voice loud enough for warning. The woman about to become a mother, or with her new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden, or stretches her aching limbs. The very outcast of the street has pity upon her sister in degradation when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law, brought down upon its victims by a machinery as sure as destiny, is arrested in its full at a word which reveals her transient claims for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should regard it negligently, unadvisedly or selfishly."

After formulating his conclusions, he says: "The time has come when the existence of a private pestilence in the sphere of a single physician should be looked upon not as misfortune but a crime."

So bold a divergence from the beaten track of medical opinion on the part of a young man was naturally resented by the leaders of the profession as an offence of the nature of *lèse-majesté*.

Hodge, of the Pessary, and another great authority, Meigs, came forth like twin Goliaths to crush the presumptuous David. Hodge declared dogmatically that "you can never convey, in any possible manner, a horrible virus so destructive in its effects and so mysterious in its operations as that attributed to puerperal fever." Meigs pronounced with the authority, but something of the obscurity, of an oracle, that "in the propagation of typhoid fever, they could have no more to do than with the propagation of cholera from Jessur to San Francisco and from Mauritius to St. Petersburg." Hodge begged his students to divest their minds of the dread that they could ever carry the "horrible virus"; and Meigs solemnly said: "I prefer to attribute them (namely, the deaths) to accident or Providence,

of which I can form a conception, rather than to a contagion of which I cannot form any clear idea"

David slew both giants with the sling of satire. He appealed to medical students not to be deceived by the statements of the two distinguished professors, which seemed to him to encourage professional homicide. He added: "They naturally have faith in their instructors, turning to them for truth, and taking what they may choose to give them; babies in knowledge, not yet able to tell the breast from the bottle, pumping away for the milk of truth at all that offers, were it nothing better than a professor's shrivelled forefinger." In his booklet entitled "A Hundred Days in Europe," Holmes relates that at dinner somewhere he sat next to a successful gynecologist who had saved some hundreds of lives in his operations, and he asked: "Which would give the most satisfaction to a thoroughly humane and unselfish being, of cultivated intelligence and lively sensibilities: to have written all the plays which Shakespeare has left as an inheritance for mankind, or to have snatched from the jaws of death more than a hundred fellow creatures, and restored them to a sound and comfortable existence?" In regard to this question Professor Osler once said there was no one who could answer it so satisfactorily as Holmes himself, and expressed a curiosity to know from which the "Autocrat" derived the greater satisfaction—the "Essay on Puerperal Fever," which had probably saved more lives than any individual gynecologist, or the "Chambered Nautilus," which had given pleasure to so many thousands. The journal in which this question was asked reached Holmes, who, on January 21st, 1889, wrote to Professor Osler as follows:

"I have rarely been more pleased than by your allusion to an old paper of mine. There was a time certainly in which I would have said that the best page of my record was that in which I fought my battle for the poor poisoned women. I am reminded of that essay from time to time, but it was published in a periodical which died after one year's life, and therefore escaped the wider notice it would have found if printed in the *American Journal of the Medical Sciences*. A lecturer at one of the great London hospitals referred to it the other day, and coupled it with some fine phrases about myself which made me blush, either with modesty or vanity, I forget which.

"I think I will not answer the question you put me. I think oftenest of the 'Chambered Nautilus,' which is a favorite poem of mine, though I wrote it myself. The essay only comes up at long intervals. The poem repeats itself in my memory, and is very often spoken of by my correspondents in terms of more than ordinary praise. I had a savage pleasure, I confess, in handling those two professors—learned men both of them,

skilful experts, but babies, as it seemed to me, in their capacity of reasoning and arguing."

In 1893, at a dinner of the American Gynecological Society in Philadelphia, a letter from Holmes was read, in which, referring to his writings on puerperal fever, he said: "I think I shrieked my warning louder and longer than any of them, and I am pleased to remember that I took my ground on the existing evidence before the little army of microbes was marched up to support my position."

This not inaptly expresses the service rendered to humanity by Oliver Wendell Holmes in the matter of puerperal fever. It was a very great step in advance to convince men of the fact of its contagiousness. But it was not a solution of the problem. That was reserved for another who, less fortunate than Holmes, was without honor in his lifetime and died, a disappointed and broken man, in a madhouse.

Ignaz Philipp Semmelweis was born at Budapest in July, 1818. He studied medicine at the university of his native city and also in Vienna, where he took his doctor's degree in 1844. As a student he had attracted the favorable notice of Rokitansky and Skoda, and it was his first intention to devote himself to medicine. Being, however, appointed assistant in the maternity department of the Vienna General Hospital, then under Klein, he gave himself to the study of women's diseases. At that time the department was devastated by puerperal fever, the deaths never being less than 5 and often reaching nearly 8 per cent., sometimes much higher. In the period from October, 1841, till May, 1843, of 5,139 women confined in the maternity 829 died, a mortality from childbed fever of more than 16 per cent. Besides Klein's clinic there was another, of which Bartsch was the head. In both alike instruction was given to medical students and to midwives, and as long as this arrangement continued there was no marked difference in the death rate. By an order of the Government, however, Klein's clinic was reserved for students and that of Barsch for midwives, and before long it became evident that the mortality in the former was largely in excess of that in the latter. In the period of six years, 1841 to 1846, the death rate in the students' clinic was 9.29, while that in the other was only 3.38. The matter was investigated by several commissions of inquiry, but they failed to discover the cause. So sinister was the reputation of Klein's clinic that women who found themselves in it gave themselves up for lost and begged to be sent home. Every day priests administered the last consolations of religion in the fatal wards, the fact being notified by the ringing of bells. Semmelweis says:

"I myself was terror stricken when I heard the sound of

the bells at my door, a deep sigh rose in my breast for the unfortunate mother, who was the victim to a cause hitherto unknown; this worked on me as a fresh incentive that I should, to the best of my ability, endeavor to discover the mysterious agent, and a conviction grew day by day that the prevailing fatality in No. 1 Clinic could in nowise be accounted for by the hitherto adopted etiology of puerperal fevers.*

He saw that it could not be explained by the "atmospheric cosmic, or telluric influences" to which it was generally attributed, for the mortality was confined to certain wards whose conditions in these respects differed in no way from the others and from private lying-in rooms in the city. Overcrowding could equally be excluded. Semmelweis observed that, while patients in Klein's clinic who had been in labor for 24 or 48 hours were doomed to almost certain death, there was no unusual mortality among cases of protracted labor in Bartsch's wards. He noted further that among women delivered before admission to the hospital the death rate was insignificant. As to all this, Semmelweis says:

"The fatal termination of almost all the cases of protracted labor, and the immunity from fever in those who were admitted after delivery, seemed to controvert the theory that the fatality of No. 1 Clinic was to be attributed to local endemic causes, as was suggested. Again, when I consider the wholesale attacks of patients lying side by side, a circumstance not noticed in the other clinic where the treatment was in no way more skilful or more conscientious; lastly, the disfavor with which all those were looked upon who were in any way connected with the unfortunate clinic; all these things engendered a state of mind which rendered my life anything but enviable."

Giving up his appointment for a time, Semmelweis visited the maternity hospitals of other countries, especially those of Great Britain. On his return to Vienna he heard of the death of a friend, Professor Kolletschka, who had succumbed to the results of a dissection wound which caused phlebitis, with pleurisy, pericarditis, peritoneal and cerebral complications, and secondary abscesses. The case made a deep impression on the mind of Semmelweis from the striking similarity of the symptoms which he had so often had occasion to observe in fatal cases of puerperal fever. Reflection on the case of his friend revealed to him in a sudden flash of light the real nature of childbed fever. The students who attended Klein's clinic were much engaged in the study of practical anatomy, and they came to the lying-in wards straight from the dissecting room

*Quoted by Dr. Theodore Duka in his little monograph, entitled "Childbed Fever: its Causes and Prevention" (Hertford: Printed by Stephen Austen & Sons, 1888), on which this brief account of Semmelweis is founded.

after simply washing their hands with soap and water. The conclusion was irresistible, that they conveyed on their hands a poison which they introduced into the body of the parturient woman, and in this way septicemia was produced in the same way as had occurred in the case of Kolletschka.

Semmelweis saw that a newly delivered woman is in the position of a patient with an open wound, and that puerperal fever is, in fact, produced by infection through the raw surface of the uterus. Hence it is claimed for him by no less an authority than Hueppe that he was the true begetter of the septic treatment of wounds. But he was far in advance of his day, and though his views found powerful supporters, they were strongly opposed by Scanzoni and other leading authorities. It must be admitted, too, that Semmelweis seems to have been deficient in moral backbone. While complaining bitterly of persecution, he had little stomach for the fight which is forced on every pioneer of new truth. It was only with difficulty that he could be induced to bring his views before the medical profession, and for many years he allowed his enemies to denounce him without attempting to reply. It was with great reluctance that, towards the end of his life, he produced a book in which his views are fully set forth. He had no chance of getting a professor's chair at Vienna. Moreover, as a Hungarian, he was looked upon with suspicion and disfavor by the Austrian Government. Disappointment and stress of politics finally drove him from Vienna. After a time he was appointed to the chair of midwifery in the University of Budapest. In that position he was able to speak with greater authority, but petty annoyances to which he was subjected, proved too much for his overstrung temperament, and he had finally to be placed in an asylum at Vienna. There he died on August 17th, 1865, in the forty-seventh year of his age. The direct cause of death was, by a coincidence of which there are not a few examples in medical history, that form of blood poisoning whose nature he had done so much to elucidate. Before mental derangement had manifested itself, he had wounded his hand in operating on a new-born infant. The wound gave rise to an abscess, and general infection supervened. His body was taken to its last resting-place from the very hospital in which he made his memorable discovery.—*The Practitioner.*

CLIFFORD ALLBUTTS' ADDRESS AT ST. LOUIS.

In one of its October issues, *American Medicine* gives in full the simple, forceful paper read at the Congress of Arts and Sciences by the respected Regius Professor of Physic at Cambridge. As literature the essay is beautiful. As a message it is of the most direct and practical nature. Choosing the ever-absorbing history of medicine as a language, in the terms of which he finds most profit for the task in hand, the speaker reviews the relations in the past of head to hand, and, from the great variation in respect given through the different centuries to the development of intelligent skill in the use of the latter of those two factors of human skill, draws a clear and concise lesson for application in the present era. For he sees a grave danger in the present-day separation of medicine and surgery, a separation which has proceeded so far that Mr. Chamberlain, a statesman notably in sympathy with the healing craft, referred lately to "these two great professions." Again, so closely always has the growth of medicine been associated with philosophy on the one hand, and the practical sciences on the other, that, when he finally comes to his conclusion, the moralist is able to speak more broadly than as a physician, in indicating a means of prevention of a considerable danger to modern education in these other paths.

The glance through the years commences with the Grecian age. Hippocrates commands our eternal respect because of the practical element in his work. Handicapped as he was by the humoral theory, he so pursued a "laborious grinding at nature," using his reason in a perceptive and interpretative manner, that his spirit is broad, rational and almost scientific. If he possessed no accurate knowledge of internal anatomy, he and his followers acquired much intelligence in palpable, clinical anatomy, so that the moment an inward malady, such as empyema, worked its way to the surface it was well within their grasp, and a splendid surgical ability had they. Thus Hippocrates is said in fractures and dislocations of the forearm to be more complete than Boyer; in congenital dislocations, richer than Dupuytren. Eye diseases were at a high degree of understanding, as were obstetrics, which always flourish when surgery flourishes.

The chief lesson to be learned from this period, truly a great one, is the close relationship and division of honor between medicine and surgery. From Celsus to Galen this condition held, and among the noteworthy achievements of the great Roman of 100 A.D., may be mentioned resection of the sternum

for caries, the heart being exposed, and also the excision of a broken scapula. From the days of Galen, however, began the long dark night of medicine, a night illumined but once by the practical Avicenna and his contemporary Arabs. This time of degradation of the healing art came about by the cutting off of its right arm, surgery. The religious stoicism of the East, the narrow bigotry of the West, contributed to its downfall. Work with the hands called forth contempt. "Why dissect if you trust Galen?" they asked. In the tenth century the University of Paris excluded all who worked with the hands. St. Corne followed, and thus was the bifurcation of medicine and surgery complete. This period may be looked upon as the dark chapter in the chronicles of medical evolution. But the change was to come, and it was the lowest stratum of medical creatures, "the wayfaring class of bonesetters, oculists, plastic operators, and cutters for stone and hernia," that evolved Franco, a man to become truly great, and to pave the way for that master, Ambroise Paré. These two men were the pioneers of the great development which commenced at the beginning of the sixteenth century. Paré, so eminent did he become, was able to attain to the highest social position in his native land, in spite of the exclusiveness of the faculties of Paris, in spite of his lack of general education, and even of Latin. Thus it was that surgery had its bitter revenge for the way in which it had been laid so scornfully aside.

Leaving the historical, the writer goes on to deduction. "This is the truth I have tried to get home to you," he says, "that in the truncation of medicine the physician lost not only a potent means of treatment, he lost thereby the inductive method, he deprived his brains of the co-operation of the subtlest machine in the world, the human hand." Pure thought, he thinks, has occupied too many great minds. That it all may have been vain seems possibly unreasonable to judge, and we may find that our regard for the inductive may lead us to look too critically at methods which may yet play some lasting part in evolution, but abstraction is abstraction, and carries us a long way from deeds and things.

Our universities are apt to make of education thought without hands, our technical schools hands without thought. It is a bridge between craft and thought that the writer urges, and the examples he cites as notable for their combining of these qualities are such as Helmholtz, Stokes, Virchow, Pasteur, and Lister, in science. He commends the University of Birmingham in its having a coal mine on the grounds. He admires the wonderful confederacy of head and hand of the artists, Michael Angelo and Leonardo da Vinci, "the greatest craftsmen perhaps the world has seen," who were as skilful to invent a water

engine, to anatomise a plant, to make a stonecutter's saw, as to build the dome of St. Peter's above the clouds of Christendom.

Finally, our tendency to regard the fine arts as honorable, mechanical arts as servile, our weaning of our young from simple crafts through which they might rise to lovely crafts, and the teaching of them the insolence that, except in sport, they should drop the acquaintance of the fingers—are all points on which he warns us. For "it was by the mouths of barbers and cutters rather than of the Pharisees of the colleges, that medicine breathed her lowly message to her children." H.S.H.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

Urine Examination.

R. C. Cabot, Boston (*Journal A. M. A.*, March 18-25), states that, incited by a statement of Councilman that the chemical and microscopic examination of the urine failed to give certain information of the character of the renal lesions, as well as by discrepancies coming under his own observation, he has compared critically the records and *post mortem* findings in the cases that have come in autopsy in the Massachusetts General Hospital since 1893. Although the number of cases is not large, he thinks they warrant the following conclusions: 1. Many cases of acute glomerular nephritis occur that are unrecognized by any known methods of examination. 2. The diagnosis is at fault in some cases of subacute and chronic glomerular nephritis, but in the great majority of cases the condition of the urine, taken in connection with other symptoms, foretold the autopsy findings. 3. In chronic interstitial nephritis the diagnostic resources appear to be neither so sufficient as in the chronic glomerular form, nor so inadequate as in the acute glomerular nephritis. In about a third of the cases the diagnosis was correctly made before death. 4. Among other conditions mistaken for nephritis bytoo much reliance on the urinary findings are senile and arteriosclerotic condition, mistaken for chronic nephritis, while in conditions involving passive congestion or acute kidney degenerations, the urine occasionally simulates that of acute nephritis. Even where no lesions are found at autopsy the urine is sometimes highly albuminous and full of casts. 5. In ordinary urinary examinations the common errors are: (*a*) The attempts to estimate urea without accurate knowledge of the patient's metabolism. (*b*) Stating that renal cells are present when all that is seen are small mononuclear cells, perhaps from the kidney tubules, perhaps not. 6. Cryoscopy and other attempts to test the renal permeability more directly are not yet capable of supplementing in clinical work the older methods of examination. Cabot holds that the vast majority of estimations of urinary solids, including urea, are a waste of time, since they are not and can not be made part of a general metabolism experiment, and that the attempt to estimate the anatomic condition of the kidney

by measuring albumin and by searching for casts is fallacious. The most reliable data are the twenty-four-hour quantity, the specific gravity and the color.

The Blood Changes in Pneumonia.

In blood cultures from 175 cases of lobar pneumonia, E. C. Rosenow, Chicago (*Journal A. M. A.*, March), found pneumococci in all but fifteen. In eleven of the fifteen cases the second culture was not possible. In the other four, repeated cultures failed, though in one careful search of the smears directly from the blood revealed pneumococci. Leucocytosis was high in all four, and he was inclined at first to suspect a phagocytic action, but later research showed that the negative cultures were made later in the disease, thus indicating a diminution in number or viability, or both, of the pneumococci at the time of crisis. Rosenow does not seem to consider the blood cultures of great prognostic value in the disease, though he says, other things being equal, a high leucocytosis appears to be a favorable sign rather than otherwise. The agglutination test of the pneumococci he does not think of much practical value. The point he considers of most importance is the reaction changes; a well-marked acid reaction associated with a voluminous sediment appearing in cultures of pneumococci in pneumonic and not in normal serum. He asks, in view of this fact, whether some of the symptoms of pneumonia may not be due to an acid intoxication of the system, and, in support of this theory, he adduces experiments which have been made with the alkaline treatment for a year past in Dr. Frank Billings' clinic, in the Presbyterian Hospital. From one to three drams of sodium bicarbonate in at least four ounces of water were given by the mouth or in still larger doses by the rectum. No other treatment was employed except heart tonics, catharsis or venesection whenever required, which was very seldom. Judging from the results this alkaline treatment seems rational.

Immunity.

In the chapter of the special article on Immunity, *Journal A. M. A.*, March 18, Ehrlich's definition of toxins is given and the method of preparation of soluble toxins by filtering of cultures and by precipitation. This does not produce a pure toxin, and some micro-organisms produce more than one body of this nature. There are also non-specific toxic substances, and under these circumstances the essential test of the toxin must be the production of an antitoxin for the specific ailment it produces. There are some organisms, however, which produce highly toxic conditions, typhoid, cholera, etc., but which do not furnish toxins until the dead or ground-up bodies are

employed or till the cell contents are set free by autolysis or self-digestion. Such are the so-called intracellular toxins, and from these, so far, we have not been able, *The Journal* says, to obtain efficient antitoxins. Other toxic substances may be derived from bacteria and may represent some chemical change in the process of disintegration, and here the immunization test must also be employed to determine their true nature. The method of commercial preparation of antitoxins is given at some length, and the adopted antitoxin unit is explained, and the method of testing diphtheria antitoxin is described. The advantages of such a uniform method of standardization and insurance of the purity of the product in this country is emphasized. The possibilities of poisoning by some adventitious toxin in the serum must be thoroughly guarded against.

On the Administration of Antistreptococcic Serum.

In *The Lancet*, December 31st, 1904. J. W. Thomson Walker, M.B. (Edin.), P.R.C S. (Eng.), commenting on his experiences draws the following conclusions:

1. That injection of antistreptococcic serum in cases of pure streptococcal infection has been followed by strikingly beneficial results.

2. That variability in the results of the serum in proved streptococcal infection has been due to the selective activity displayed by the antitoxin of each variety of streptococcus or to the serum being used too late in the case or having lost its activity from staleness.

3. That more uniform results are likely to be obtained from the present "compound" antistreptococcic serum than from the earlier forms, from the prompt injection of serum at the commencement, instead of near the close, of a severe infection, and from the use only of serum which has been recently prepared.

4. That the initial dose may with benefit be increased, and that a large quantity spread over several days causes no ill effect.

5. That the administration of the serum should be continued for some days after the general symptoms have disappeared and a recrudescence thus avoided.

Writing of the dosage, he suggests 20 to 30 c.c. as the initial dose, followed by smaller doses.

No ill effects have followed the injection of 80 c.c. in daily doses of 10 c.c. Dr. Victor Bonney, *Lancet*, Vol. I., 1900, p. 1342, injected 420 c.c. in forty-two injections in seventeen days; and Dr. Harold Low, *Lancet*, March 19th, 1898, p. 780, injected 263 c.c. altogether, 67 c.c. being injected in twenty-four hours.

C. J. C.

The Prognostic Value of the Diazo-Reaction in Enteric Fever.

Writing under this head in the *Lancet*, February 4th, 1905, J. D. Rollestin, M.A., M.D. (Oxon.), states his observations on a series of sixty-five cases. His conclusions are that:

1. In all but seven attacks the diazo-reaction tends to disappear in the course of the second or third week, this disappearance shortly preceding, or coinciding with, the commencement of lysis. Of his cases admitted to the Grove Fever Hospital, Footing, those admitted during first week showed 9 positive, none negative; second week, 24 positive, 9 negative; third week, 9 positive, 8 negative; fourth week, 2 positive, 2 negative, and fifth week, 1 positive, 1 negative. In twenty-seven of these cases in which the test was employed throughout the disease the diazo-reaction became finally negative at the following dates: first week, 0; second week, 6; third week, 12; fourth week 3; fifth week, 4; sixth week, 1; and seventh week, 1. His experience coincides with that of Oppenheim and Loeper, who hold in opposition to Rivier (1898) that an intense reaction is by no means the appanage of severe forms of the disease as it is found in the immense majority of cases in which the urine is examined during the first fortnight.

2. Its reappearance during or after the completion of lysis is a warning of recrudescence or relapse or of complications directly due to the specific bacillus.

3. A sudden disappearance of the reaction associated with a deterioration of the general condition is a bad omen.

4. The character of the reaction is a useful check to the history. A decidedly negative reaction in an undoubted case of enteric indicates that the patient has in all probability been ill for at least fourteen days; a positive reaction, on the other hand, in the absence of a relapse or recrudescence, shows that the illness has lasted little more than a fortnight at the most.

C. J. C.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Aseptic Operating.

H. T. Byford, Chicago (*Journal A. M. A.*, March 11), objects to rubber gloves and impervious covering of the hands on the ground that they produce sweating, and that a scratch or puncture would liberate the accumulation of germ-laden perspiration. He advises soaking the hands thoroughly to soften the cuticle and to loosen the dirt between the epithelial scales, and

for this purpose he prefers water drawn in a basin and frequently changed to running water. After soaking the hands and scrubbing them with green soap he advises a scrubbing with diluted acetic, citric or oxalic acid. This in turn is followed by soaking in 90 per cent. alcohol and then in a 1-1000 solution of bichlorid of mercury. In protracted operations, he advises dipping the hands in mercuric solution every 10 or 15 minutes to insure asepsis. He does not believe in mixing the solutions of alcohol, green soap, etc., but prefers to keep them separate, and he objects also to sterilized sleeves. Of equal importance is the sterilization of the field of operation. It is easy to sterilize the abdomen, but it is more difficult in case of the groin or genitalia. The shaving should be carefully done to avoid abrasions and the parts scrubbed, not only with soap, but with alcohol and mercuric chlorid, and minor operations should receive the same attention as the major. The best after-dressing is sterilized gauze shreds over the sutures and a thick layer of sterilized gauze over these. Inguinal wounds should be washed off after six days and then covered with dry sterile gauze, to be removed daily or otherwise as occasion requires. Dry dressings over peritoneal sutures should be changed every four hours or oftener if they become saturated.

Removal of Glands in Cases of Malignant Diseases of the Tongue.

In the *British Medical Journal*, February 11th, 1905, Mr. Butlin, with whose admirable work on "Diseases of the Tongue" most surgeons are familiar, describes what may be called the second stage of the operation which he performs in cases of cancer of the tongue. This is the clearing out of the contents of the anterior triangle of the neck in a manner analogous to that in which the axilla is cleared out in operations performed for malignant disease of the breast. Not only does he remove the major portion of the subcutaneous tissue and platysma muscle, all the lymphatic glands, including the submental, the submaxillary, and the upper and lower deep cervical groups, but also the submaxillary salivary gland beneath or within which lymphatic glands are frequently embedded, and often a part of the parotid salivary gland, a part of the omohyoid muscle, and occasionally a portion of the internal jugular vein, and possibly also of the external carotid artery as well.

While stating that cancer of the tongue in its anterior third usually involves the submental glands, in the middle third the submaxillary glands, and in the posterior third the deep cervical glands, he points out the fact that no matter what the situation of the cancer may be one cannot rely upon the glandular involvement being confined to any particular group. Hence, he

regards it as advisable in all cases to make the complete dissection of the anterior triangle, as he has done in practically all his cases since December, 1895.

In his operation two incisions are employed, the first one extending along the anterior border of the sterno-mastoid muscle, from the mastoid process above to the sterno-clavicular joint below, and the second one from the symphisis menti across the side of the neck to meet the first, at nearly a right angle, opposite the upper border of the thyroid cartilage. These map out two flaps, which, being reflected, consist of little more than skin on account of the presence of a submental and also a submaxillary lymphatic gland in the subcutaneous tissue. The dissection is made from below upwards, and when completed the large vessels and the nerves remain thoroughly cleared of all fatty, fascial or glandular tissue.

On account of the inability to apply adequate pressure to the neck, and the likelihood of considerable oozing of blood and serum under the readjusted flaps, and possibly also of saliva from the wounded parotid salivary gland, drainage is carried out by means of gauze strips and a tube during the first day, and after that by means of the tube alone as long as desirable. A salivary fistula never occurs, and healing is complete in from nine days to three weeks.

Mr. Butlin, who, from a large experience, is now thoroughly convinced of the propriety of this procedure, performs the operation in a little less than one hour and a half, and claims that it is not difficult. The average time of performance is nine days, subsequent to the preliminary operation on the tongue itself. This allows healing of the wound of the tongue to become sufficiently advanced to remove the chance of infection of the neck by way of the tongue, and to enable the patient to take readily ample nourishment to withstand the effects of the second operation. In several cases where the glands of both sides were involved, Mr. Butlin has cleared out the contents of the two anterior triangles, the patients making very good recoveries. The published results of his operations undoubtedly uphold his method of procedure.

F. W. M.

Editorials.

AMERICAN MEDICAL ASSOCIATION.

The next meeting of the American Medical Association will be held in Portland, Oregon, July 11th to 14th. We learn from the *Buffalo Medical Journal* that the attendance is likely to be larger than any previously held on the Pacific Coast. Two reasons are given for this—first, the railroads were never before able to give such good accommodation to tourists as now; second, the Lewis & Clarke Exposition, the Western World's Fair, will furnish attraction beyond any previously offered on the Pacific slope. Those living in Buffalo and vicinity who expect to attend are recommended to go first to Chicago. The initial road from Chicago to Portland is the North-Western Railroad to Omaha, and thence by the Northern Pacific to Portland; and returning, the Northern Pacific Railroad will carry passengers to St. Paul, and the North-Western Railroad thence to Chicago. Intending visitors are requested to make application to the railways early, because if the agents of the latter know approximately the number of passengers for whom provision must be made, they will be able to give better accommodation. As the North-Western is the initial line, according to the diagram recommended, physicians are asked to communicate with the main office, 201 Main Street, Buffalo.

THE FATHER OF LARYNGOLOGY.

Several journals, both lay and medical, have made reference to the fact that on March 17th, St. Patrick's Day, Manuel Garcia reached his one hundredth birthday. The *Practitioner* (English) considers that it is highly probable that the medical profession scarcely realizes the debt which it owes to outsiders in respect of advances to sciences directly bearing on this work. One of the most conspicuous instances of this is a discovery which sheds light on what was previously one of the dark places of medicine, and is recalled by the fact that Manuel Garcia, the inventor of the laryngoscope, completed the hun-

dredth year of a useful and glorious life on March 17th. Garcia has lived for many years in London, England, and still continues to advise singers and composers in that city. His extreme age is the more astonishing in consideration of the fact that in 1829, that is, seventy-six years ago, he retired from the stage on account of a weak constitution. Fortunately his farewell to the stage did not mean a leave-taking of the art of music. After he invented the laryngoscope he was made a doctor of medicine by Konigsberg University. The investigations leading to the invention were very important from a medical standpoint. As a result of his experiments and observations Garcia wrote a monograph on the mechanism of singing, which was received with enthusiasm by the Royal Academy, and has been the foundation of many articles since written on the subject. In 1847 he published a book on the art of singing, which is now considered a classic. In his youth he was a noted baritone singer, and later became a famous teacher. Jennie Lynd was one of his pupils at the Royal Academy, where he was a professor for more than forty years.

NEW DISPENSARY FOR OUT-PATIENTS IN GLASGOW.

The formal opening of the new dispensary of the Western Infirmary of Glasgow, which took place January 18th, was an interesting function. We learn from the *British Medical Journal* that the Chairman of the Managers, in a short address, said the question of increased dispensary accommodation had been under consideration since 1892, but no special appeal was made until 1897. In that year they had asked for subscriptions for dispensary purposes, and received about $125,000. During last year the patients treated in the old buildings numbered 22,000, and the number of separate visits made was 94,000. Besides the relief afforded the sick poor, the dispensary greatly aided medical education. Last year 490 students were in attendance on the out-door practice. In the design of the new buildings special attention had been given to the increased facilities for teaching. The estimated cost was nearly $175,000, or about $50,000 more than the sum specially subscribed.

Sir Lauder Brunton, who went from London to Glasgow to deliver an address, referred to his long connection with the out-door patients at St. Bartholomew's Hospital. He congratulated the company on the erection of the new dispensary buildings. He believed that the money expended in such a way benefited all classes of the community. He considered that in the new dispensary the arrangements for teaching were admirable, inasmuch as future medical men would in consequence learn much of the treatment of the common ailments. He considered that the new dispensary was the best of its kind in existence, and expressed the hope that those who had so munificently founded the institution would see that it was properly sustained in the future.

This report is specially interesting to us in view of the fact that Mr. Cawthra Mulock has recently given to the Toronto General Hospital Trust the sum of $100,000 for a similar building to be erected in Toronto in the near future. Mr. Mulock has also expressed a desire that the new building, when erected, will be so arranged as to give increased facilities for clinical teaching.

DEATHS FOR FEBRUARY, 1905.

OFFICE OF THE SECRETARY,
PROVINCIAL BOARD OF HEALTH.

The returns for the above month are more nearly complete than for the same month last year, and it is gratifying to know that the number of deaths reported are less. In February, 1904, the Division Registrars reported 2,332 deaths with a death rate of 14.4 in 1,000, while for the corresponding month this year 2,263 have been recorded, representing a population of 1,935,897, which makes the mortality rate 14.0 in 1,000.

The cities, towns and villages reported 1,294 from a population of 927,000, which brings the death rate up to 16.1, but the rural districts returned only 1,014 deaths from a population of 1,008,897, giving a death rate of 12.0.

Smallpox has reached a very low point, only eight cases occurring during the month as against 41 with one death a year ago. Scarlet fever shows a case reduction, but a slightly

increased death rate. Of the 209 cases and 16 deaths that have occurred, 141 with nine deaths were reported from the cities and towns, which makes a case mortality of 6.3 per cent., and in townships 68 cases and seven deaths took place, making a case mortality of 10.3 per cent. Diphtheria has not been so prevalent, as may be seen by the comparative table. The cities and towns returned 216 cases with 28 deaths, and the rural districts 54 with seven deaths, the case mortality being the same in both, 12.9 per cent. Typhoid fever shows but little change, while tuberculosis caused 165 deaths, or 20 less.

COMPARATIVE TABLE.

	1905.		1904.	
DISEASE.	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox	8	0	41	1
Scarlet Fever	209	16	251	13
Diphtheria	270	35	289	43
Measles	119	2	41	1
Whooping Cough	22	3	36	16
Typhoid Fever	43	19	60	18
Tuberculosis	177	165	185	185
	848	240	903	276

Personals.

Dr. J. Orlando Orr returned from England to Canada March 27th.

Dr. Jas. M. MacCallum, of Toronto, started on a trip to Europe February 25th.

Dr. Bryce McMurrich, of Bothwell, visited Toronto about the middle of March.

Dr. Thomas Roderick, of Montreal, has spent the greater part of the winter in Florida.

Dr. W. P. Caven, of Toronto, returned from Atlantic City, and resumed practice March 5th.

Dr. Geo. McDonagh, of Toronto, returned from his Mediterranean trip and resumed practice.

Dr. W. J. O. Malloch left Toronto for England March 13th. He will spend considerable time in post-graduate work.

Dr. Geo. A. Peters, of Toronto, after an attack of la grippe, spent a portion of the month of March at "The Welland," St. Catharines.

Dr. James Stewart, of Halifax, President of the Canadian Medical Association, after a short visit to Toronto, where he was the guest of Dr. Primrose, left for his home March 20th.

Dr. A. McPhedran, of Toronto, has recovered from an attack of la grippe. He left home March 8th for Washington, and after spending a few days in that city, went on to South Carolina.

Dr. A. Primrose went to Edmonton, N.W.T., to give expert evidence at the murder trial. He then went on to the Pacific Coast, visiting Vancouver and Victoria, and returned to Toronto March 17th.

In answer to an inquiry regarding the case of Dr. Harper, President of the Chicago University, Dr. Nicholas Senn said the suspicions of malignant disease of the cecum were well founded and have been corroborated by Dr. McBurney's exploratory incision.

A curious libel case has been brought against the *New Orleans Picayune* by Dr. Martin (*Detroit Medical Journal*). Suit is brought because the newspaper published an account of an operation on a child. The operation was successful, and the article published was commendatory, but the physician claimed damages on the ground that his professional reputation had been injured because the Society of Physicians to which he belonged was averse to such publication.

Obituary.

DAVID THOMPSON, M.D.

Dr. Thompson, of Hamilton, formerly of Cayuga, Ont., died February 19th, aged 43. He received his medical education at Trinity Medical College, Toronto. After graduating he went to the Old Country and took the double qualification of Edinburgh and Glasgow.

NIVEN AGNEW, M.D.

Dr. Agnew, of Brandon, Man., died at St. Paul, March 1st, from pneumonia. He graduated M.D. from Victoria University, 1858. After practising for some years in Toronto, he moved to Winnipeg, and subsequently to Brandon, where he had been in practice for several years.

LUTHER HOLDEN, F.R.C.S.

Mr. Holden, Consulting Surgeon, St. Bartholomew's Hospital, author of certain works on anatomy, of which the chief one was that on "Human Osteology," died at Putney, February 6th, in his 90th year.

Book Reviews.

The Treatment of Fractures: With Notes upon a Few Common Dislocations. By CHAS. L. SCUDDER, M.D., Surgeon to the Massachusetts General Hospital. Fourth Edition, thoroughly Revised, Enlarged, and Reset. Octavo volume of 534 pages, with nearly 700 original illustrations. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Polished Buckram, $5.00 net; Sheep or Half Morocco, $6.00 net. Canadian Agents: J. A. Carveth & Co., Limited, Toronto.

There are few fields in surgery that are not overcrowded with literature, much of which would be better unwritten. However, this cannot be said of that field covered by the work under review. Since the appearance of Dr. Frank Hamilton's memorable work nothing has appeared in the English language that equals Scudder's. It is bound to become a classic on the subject of fractures. The advantage that is gained by the subject of radiography has undoubtedly been great, and the author has taken full advantage of this. That four editions have appeared in four years is a fine testimony of the value of the work.

The illustrations in the book are remarkable for their clearness, and wherever it is possible sketches are introduced showing the details of the splints and their modes of application, particularly where the more elaborate illustrations would not show these details. The description of the method of reducing fractures and the application of splints is gone into with great detail, yet there is no such thing as verbosity in the book. The chapters on "The Rontgen Rays and its relation to Fractures," "The Employment of Plaster-of-Paris," and "The Ambulatory Treatment of Fractures" are exceedingly important at the present time and convey the present status of the question concisely put. We look upon this as the most up-to-date work on Fracture, and one that no practitioner who has to deal, even unfrequently, with fractures should be without.

The illustrations, typography and binding are in the usual good style of the W. B. Saunders & Company.

Gallstones and Their Surgical Treatment. By B. G. A. MOYNIHAN, M.S. (LOND.), F.R.C.S., Senior Assistant Surgeon to Leeds General Infirmary, England. Octavo volume of 386 pages, illustrated with text-cuts, some in colors, and nine colored insert plates. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, $4.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

The great and increasing importance of the subject of gallstone disease is a sufficient warrant for the publication of this work, and Mr. Moynihan's extensive experience in treating cholelithiasis specially fits him to write an authoritative and

trustworthy work. A full account is given of the origin and causation of gallstones, and of the pathological changes and clinical manifestations to which they give rise. Special attention has been paid to the detailed description of the early symptoms of cholelithiasis, enabling a diagnosis to be made in the stage in which surgical treatment can be most safely adopted. Every phase of gallstone disease is dealt with, and is illustrated by a large number of clinical records. The account of the operative treatment of all the forms and complications is full and accurate. The illustrations, a number of which are in color, including nine insert plates, are unusually clear and artistic, and form a special feature.

Diseases of the Ear, Nose and Throat. Illustrated. A compend of Diseases of the Ear, Nose and Throat. By JOHN JOHNSON KYLE, B.S., M.D., Lecturer on Otology, Rhinology, and Laryngology, and Assistant to the Chair of Surgical Pathology in the Medical College of Indiana, etc. 85 Illustrations. 12mo, 280 pages. Strongly bound in Cloth, $1.00; Interleaved, for the addition of notes, $1.25. Philadelphia: P. Blakiston's Son & Company.

This volume presents the best condensed thought of the most accepted authorities on this subject, and may be appealed to with safety and satisfaction. In brief, there is no better epitomized laryngology than the Kyle Compend.

The Physician's Visiting List.

The Physician's Visiting List (Lindsay & Blakiston's) for 1905-06 is a small, neat, compactly-made, strongly-bound pocket book, with leather cover, gilt edges, tuck, pocket, and rubber-tipped pencil, made up to hold 25 to 100 patients' records per day, week or month, dated and undated, with pages for special memoranda and tables for ready reference. It is a book of original entry; a simple, plain statement of a year's work that may be kept with a minimum of labor. It is the ideal book for the physician. P. Blakiston's Son & Co., Philadelphia.

Diseases of Children. Third Edition, Revised. Illustrated. A Compend of Diseases of Children. Especially adapted for Students and Physicians. By MARCUS P. HATFIELD, Professor of Diseases of Children, Chicago Medical College. Colored Plate. Third Edition. 12mo, 241 pages. Strongly bound in Cloth, $1.00; Interleaved, for the addition of notes, $1.25. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street.

Dr. Hatfield seems to have thoroughly appreciated the needs of students, and most excellently has he condensed his matter into available form. It is in accord with the most recent teachings, and while brief and concise, is surprisingly complete in subjects and detail. . . . It is free from irritating

repetition of questions and answers which mars so many of the compends now in use. Written in systematic form, the consideration of each disease begins with its definition, and proceeds, through the usual sub-headings, to prognosis and treatment, thus furnishing a complete, readable text-book in miniature.

A Text-Book of Physiology. By ISAAC OTT, A.M., M.D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. With 137 illustrations. Royal octavo, 563 pages. Bound in extra cloth. Price, $3.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

The volume before us meets all the requirements of a very advanced text-book. It has brought the subject of physiology, which has made such rapid strides in the past few years, up to date. The style of the author is free, which makes the reading very much easier. Technique has been omitted, but the results of experiments are carefully given. It is necessary to the successful practice of medicine to be well grounded in physiology, and a text-book of the quality of Otts' is essential to the better understanding of this more elaborate treatise. We can thoroughly recommend the work to the student of medicine.

Diseases of the Skin. Their Description, Pathology, Diagnosis and Treatment, with special reference to the skin eruptions of children and an analysis of 15,000 cases of skin diseases. By H. RADCLIFFE-CROCKER, M.D. (Lond.), F.R.C.P., Physician for Diseases of the Skin in University College Hospital; Honorary Member of the American Dermatological Society; Membre Correspondant Étranger de la Société Française de Dermatologie; Correspondierendes Mitglied der Wiener Dermatologischen Gesselschaft; Socio Onorario della Società Italiana di Dermatologia e Sifilografia; late Physician to the East London Hospital for Children; Examiner in Medicine, Apothecaries' Hall, London. Third edition, revised, rewritten and enlarged. With four plates, two of which contain 12 colored figures, and 112 other illustrations. Octavo. P. Blakiston's Son & Company, 1012 Walnut Street, Philadelphia. 1,400 pages. Cloth, $5.00; sheep, $6.00.

The new third edition maintains the high standard of excellence of the previous edition. The recent progress in dermatology makes an authoritative work upon the subject a positive necessity. It is a safe, accurate, eminently practical and strictly modern treatise, well and clearly written by a man of large experience and most excellent judgment. Though completely scientific, it is written in such a happy manner that the tyro may follow the writer almost as readily as the expert on diseases of the skin. It will be seen, therefore, that it appeals to general practitioners as well as specialists, while to the student it will serve as a valuable guide when he enters upon the more arduous task of practice.

The etiology, symptomatology, pathology and minute anatomy, constitutional conditions, diagnosis and treatment of each disease mentioned is fully entered upon, the therapeutics,

dietetics and general regimen coming in also for their due share of attention, great strength in the accuracy of statement and method and clearness of definition and differentiation being shown. The newer remedies and bacteriological researches, in their bearing upon dermatology, are carefully noted.

The book proves Dr. Crocker to be closely in touch with the work and teachings of modern dermatology; and he has sifted from the vast accumulations of recent literature the facts and opinions which have a definite value and are worthy of permanent record. The illustrations, too, showing as they do the morbid conditions of the different structures affected in diseases of the skin, are a not unimportant feature.

Many valuable additions to the text are noted in the new third edition of this standard work. The whole book has been systematically gone over and numerous changes made where recent progress in dermatology and a more exact knowledge of the subject has dictated. The result is a work every page of which bears the impress of thoroughness and large personal experience. The typography, paper and binding are of the usual good style of the publishers.

Light Energy: Its Physics, Physiological Action and Therapeutic Applications. By MARGARET A. CLEAVES, M.D., Fellow of the New York Academy of Medicine; Fellow of the American Electro-Therapeutic Association; Member of the New York County Medical Society; Fellow of the Société Française d'Électrothérapie; Fellow of the American Electro-Chemical Society; Member of the Society of American Authors; Member of the New York Electrical Society; Professor of Light Energy in the New York School of Physical Therapeutics; Late Instructor in Electro-Therapeutics in the New York Post-Graduate Medical School. With numerous Illustrations in the text and a Frontispiece in colors. 1904. New York: Rebman Company, 10 West 23rd Street, Corner 5th Ave. London: Rebman, Limited, 129 Shaftsbury Avenue, W.C. Sole Representative in Canada, Charles E. Wingate, 2 Richmond Street East, Toronto.

This treatise is the first exhaustive work upon the subject in the English language and the first systematically arranged one in any language. It begins, as any book upon the subject with scientific pretensions must, with the physics, and plain careful instruction is given as to the nature, relations, resemblances and differences of all forms of light of which we have any knowledge, both the visible and the invisible. The characteristics of the various parts of the solar spectrum from the infra-red to the ultra-violet are separately considered as well as their combined action. Then are taken up the varied effect possible with various artificial lights from the plain blue to the varied forces of X-ray phenomena. Next comes a careful scientific summary of the action of all these varied forces upon the different forms from life, beginning with the most elementary forms and gradually ascending the scale through bacteria, the higher forms of vegetable life, the animal kingdom, and, finally,

the action upon the human organism as shown in the effects upon the skin, the circulation, the nervous system and metabolism.

The book is of indispensable value to the skin specialist, because it is the latest and fullest exposition of the new methods of using the various forms of light energy in cutaneous disorders. It is useful to the surgeon, for it shows him how to employ light for the production of anesthesia, and in the treatment of clean and septic wounds. It is of service to the gynecologist, because it aids in the treatment of troublesome inoperable cases. It is of service to the neurologist, because it leads to a better therapy of all curable or improvable nervous conditions, being specially serviceable in neurasthenia, neuritis, neuralgia, tabes dorsalis and other conditions. It is helpful to the general practitioner, since it leads to better results in all chronic troubles as well as in the treatment of the exanthemata, and many malignant disorders.

The Ophthalmic Year-Book. A Digest of the Literature of Ophthalmology with Index of Publications for the Year 1903. By EDWARD JACKSON, A.M., M.D., Emeritus Professor of the Diseases of the Eye in the Philadelphia Polyclinic; Ophthalmologist to the Denver County Hospital, etc. With forty-five Illustrations. Denver, Colorado: The Herrick Book and Stationery Company. 1904.

Dr. Jackson has rendered good service to all physicians interested in the eye, by publishing this year-book. It is an admirable compendium of the advances during the year of ophthalmic knowledge. He gives a digest of the literature on almost every subject, including refraction, diseases of the various portions of the eyeball, the physiology and methods of examination of the pupil, the lacrymal apparatus, general ophthalmology, etc. The illustrations are good and up-to-date. Altogether it is a book to be commended. J. T. D.

The Surgery of the Diseases of the Appendix Vermiformis and their Complications. By WILLIAM HENRY BATTLE, F.R.C.S., Surgeon to St. Thomas' Hospital, formerly Surgeon to the Royal Free Hospital, Hunterian Professor of Surgery at the Royal College of Surgeons of England, etc.; and EDRED M. CORNER, M.B., B.C., F.R.C.S., Surgeon in Charge of the Out-Patients to St. Thomas' Hospital and Assistant Surgeon to the Great Ormond Street Hospital for Sick Children, Erasmus Wilson Lecturer at the Royal College of Surgeons, etc. 210 pages. Price $2.50. Chicago, 90 Wabash Ave.: W. T. Keener & Co. 1905.

This volume, by Battle & Corner, deals with a subject of very great importance in a very lucid way. These authors have reviewed the literature on the subject that has appeared in the hundreds of lesser articles, as well as the larger works of Deaver, Kelly and others. They have based their remarks in this volume on the personal experience of themselves, together

with the opinions expressed by the hundreds of writers on this subject. They take the subject up from its early history till to-day, the chapter dealing with the history of appendicitis bringing the matter to as fine a point as possible. The technique of the operation for appendicial complications is very clearly given, and we like the method with which they treat the stump. We do not find any reference, however, to one of the rarer complications, pylephlebitis; it is a rare complication, but one that is met with frequently enough to be noted in a work of this kind. We would like to see the authors drop the diphthong in spelling, and such words as "adhaesions," "haemorrhage," "toxaemia," "faecal," spelled in the present accepted form. In the second volume we would like to see the index more complete, but these small defects will undoubtedly be overcome and the value of the work enhanced. We can thoroughly recommend it, also the manner in which the publishers have presented the work.

The After-Treatment of Operations. A Manual for Practitioners and House Surgeons. By P. LOCKHART MUMMERY, F.R.C.S. (Eng.), B.A., M.B., B.C. (Cantab.), Demonstrator of Operative Surgery, St. George's Hospital, Late Senior House Surgeon, St. George's Hospital. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. (All rights reserved.)

Mr. Mummery, in his preface to this volume, says: "The after-treatment of operation cases is a subject of such importance that it is not a little surprising to find how little has hitherto been written about it." It has been a deep regret to us in attending surgical clinics to notice that, as soon as the operative procedure was over, the class, or at any rate ninety per cent. of it, took themselves off, leaving the dressing to be done without in any way watching the methods of procedure. Occasional enquiry might be made as to the result, but seldom has the case been seen in the ward, or followed through to its termination. The after-treatment of an operation is the much neglected subject in surgery to-day. The after-treatments by different surgeons vary widely, and it is only by a wide experience and a knowledge of the best methods that ideal results can be attained. We find in this volume everything to commend itself, and do not think we say anything too much when we say that it is one of the works that every operative surgeon should have in his possession. Every recent graduate should have it, and read it before attempting any surgical work. If professors of surgery would pay more attention in their lectures to the after-treatment, it would be much better for their pupils. The profession is undoubtedly under an obligation to Mr. Mummery for this very elaborate and concise work. The publishers have presented the volume very neatly, with clear type and on good paper.

The Treatment of Syphilis. By F. J. LAMBKIN, Lieut.-Col., R.A.M.C., Specialist at the Army Headquarters, India. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1905. (All rights reserved.)

This little volume, by Col. Lambkin, is a vivid description of a large experience. The material that has passed under the hands of Col. Lambkin undoubtedly has been large, and he has made the most of it. It is a strong plea for the use of insoluble mercury treatment, and undoubtedly the subject has a strong advocate in the author. It has not been our experience to meet with exactly similar results. In the use of iodides, however, there may be something in the climatic condition of India that influences the effect there. We think that the treatment of syphilis, or, in fact, many other diseases, differs widely according to the country wherein the treatment is carried out, but we have had such good results with the mixed treatment that we must hold a different opinion to the author. It is a very instructive work, and one that should have wide perusal.

A Manual of Personal Hygiene. By American Authors. Edited by WALTER L. PYLE, M.D. Philadelphia, New York, London: W. B. Saunders. Toronto: J. A. Carveth & Co.

Dr. Pyle's hand-book has been received with general approval, and the second edition is enlarged and improved by the addition of chapters on Domestic Hygiene, Home Gymnastics, First Aid, etc. Seven physicians have assisted the editor in the preparation of this book, which will be found useful by teachers, parents and others. It is written in a clear, forcible and convincing style. The chapters on Digestion and on the Eye are among the best. We do not agree with some of Dr. Courtney's ideas about neurasthenia, but we have little fault to find with the book as a whole.

Miscellaneous.

GLYCO-THYMOLINE AS AN ORO-NASAL AND A GENERAL ANTISEPTIC.

BY DAVID WALSH, M.D.,
Senior Physician, Western Skin Hospital, London, W.

(Abstract from the *Medical Press and Circular.*)

It is only by slow degrees that medical men as a profession are learning to realize the important part played by bacteria in the cavities of the nose and mouth. One sign of this appreciation may be found in the fact that washes and gargles for the mouth and throat are being more and more adopted in everyday practice. The systematic use of such applications, however, so far as the nostrils are concerned, is for the most part still confined to specialists. One reason for this comparative neglect of a simple method of treatment by general practitioners has, no doubt, hitherto lain in the difficulty of obtaining a safe, and at the same time, an efficient antiseptic and cleansing fluid for the mucous membranes in question.

Glyco-Thymoline was brought to my notice as an excellent lotion for nasal and oral sprays and washes. On due inquiry it was found to fulfil the conditions usually recognized by medical men in the United Kingdom as vouching for the character, so to speak, of such a preparation; its composition is not a secret, its formula being freely published. Under these circumstances, I determined to try the effect of this preparation in a few suitable cases. As a general antiseptic fluid that does not coagulate albumen, and is non-irritant, deodorant and practically non-poisonous, Glyco-Thymoline has clearly a wide range of usefulness. My own observations, however, have been practically confined to its use in the nose and mouth, with results that have proved satisfactory in every instance, especially in acute coryza, pharyngitis, influenza and aseptic conditions of the mouth.

In Glyco-Thymoline we have a good, safe application in septic conditions of the mouth, throat and nose. It seems not improbable that in the near future medical men will attend more than they have done hitherto to the mucous membranes of the upper respiratory tract in influenza, measles, scarlatina, chronic and acute coryza, whooping-cough, and other infectious ailments. Post-nasal catarrh—that curse of modern civilization—has never been adequately attacked by the general practitioners. Carious teeth, again, another defect of civilization, are apt to damage the general health considerably. In both these conditions Glyco-Thymoline will be found a safe and effective remedy well worth a careful trial in practice.

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Original Communications.

NEUROLOGY AND THE PREVENTION OF INSANITY IN THE POOR.*

By CAMPBELL MEYERS, M.D., M.R.C.S. (Eng.), L.R.C.P. (Lond.),
Neurologist to St. Michael's Hospital, Toronto.

Mr. President and Fellows,—In a recent article on "The Present Status of Neurology," by Dr. Joseph Collins, of New York, he states that the progress in neurology during the last twenty years has been so gratifying, that to-day the correct diagnosis of organic diseases of the nervous system is more directly dependent upon the application of rules of scientific exactitude, than in any other department of internal medicine. Despite this fact there is no denying that a remarkable stagnation in neurology has come about. This stagnation he attributes to the disappointment of our expectations that the laboratory worker, experimenter, and pathologist would contribute to the elucidation of the origin and course of nervous disease, and also to the fact that there are no signs tending to indicate that we can look to them for much help in the future. As a matter of fact, he says that the neurologist must look to himself in the interpretation of diseases of the nervous system, and no longer pin his faith to the physiologist or pathologist. In other words, the advances of neurology must, in the future, be made on clinical lines and by clinical study.

It is not my intention at present to even attempt to discuss the broad field of neurology, but rather to make a few remarks about a portion only of this field which, though of supreme importance, has been comparatively little cultivated, of which

*Read before Toronto Clinical Society, April, 1905.

Krafft-Ebing wrote, "It is astonishing that so little notice has hitherto been given in medical literature," and in which clinical study must form the chief reliance of the neurologist. I refer to disease in that portion of the field of neurology which on the one side is bounded by nervous health, and on the other by that boundary line after passing which it is termed insanity. This disease has been discussed both as neurasthenia and as incipient insanity. While personally, as I advocated in an earlier paper, I believe a more correct designation for it would be cerebrasthenia or that subdivision of neurasthenia in which mental symptoms predominate, the more frequent use of the name, neurasthenia, by the profession at present leads me to employ this latter term in these remarks. The importance of this branch of nervous disease is at once apparent when we consider that its treatment comprises a practical prevention of insanity, which would of itself alone be even a greater blessing to mankind than the prevention of tuberculosis. Not only from a humane but also from an economic point of view is this important, for where the Government must provide for the care of the poor in both these diseases, it has only to do so for the tubercular for a limited time, while for the insane it may be necessary for twenty or more years. Further, the loss of use of the intellect of the individual to the world during the period of insanity must be considered, as well as the fact that recovery from this disease sometimes leaves a liability to recurrence, or impaired intellectual faculties, which prevent, to a greater or less degree, the resumption of business or social life to an extent previously enjoyed. That the acute, idiopathic insanities (and it is to these only I here allude, and especially to mania and melancholia) can, in the large majority of cases, be prevented by suitable treatment, when such is undertaken sufficiently early, is now recognized by all authorities; hence, the importance of the study of this branch of neurology, as I believe the cultivation of this field will yield a more abundant harvest than any which have been reaped in this branch of medicine in the past, abundant as they undoubtedly have been. Further, the clinical study of these cases, which need not depend on the laboratory worker or the pathologist to the same extent as heretofore, will give an impetus to neurology which will produce even greater results than have been attained in the past.

One great difficulty has always been the lack of realization of the serious nature of these cases. Kraepelin, in his last work, says, "that even in the mildest forms of insanity, (of which this disease is but the initial stage) the suffering is greater than that of any other class of disease with which the physician has to deal." How often in every-day practice is a

patient, suffering from neurasthenia who complains of psychic pain, told, "Oh, it's nothing, only nerves," etc., etc. The reality of the existence of these pains was strongly confirmed in my mind by an incident which arose in the following manner: A neurasthenic patient of mine was attacked with severe pains in his left shoulder during my absence in England some years ago. He consulted a surgeon, who carefully examined the shoulder without finding any evidence of local disease, and told the patient he found no cause for his pain, that it would soon be better. This improvement, however, did not take place, and the pain continued severe until my return. Some simple prescription was given him and the pain soon ceased. A short time afterwards he had the misfortune to fall and fracture his femur, from which, while it was being put up, he evidently suffered intensely. When the operation was over I asked him which had caused him more suffering, the fracture or the pain he had had in his left shoulder. He immediately replied the pain in the shoulder, and I knew his character too well to doubt his statement for an instant.

Why are these symptoms of neurasthenia often treated so lightly? I believe it is due to the fact that a hiatus in medical education has always existed in the domain of neurology under consideration. The student has excellent works on insanity written on this disease after the boundary line has been passed, but previous to this stage he has but little. A single chapter on neurasthenia in the recent text-books of medicine, written with about as much warmth as neurasthenic patients are welcomed to the wards of a general hospital, is probably all the average student reads about it. As for clinical instruction this is scanty if not altogether absent. What then must be the logical result? He goes into general practice where these troubles are common without any definite knowledge of this form of functional nervous disease, gropes about in the dark for a variable number of years, and finally grows to look upon them as whimsical, chimerical, etc., gives up their study in utter disappointment, or learns often by sad experience, both to himself and his patient, how serious some of these troubles are. Having devoted my entire attention to neurology for nearly fifteen years, a branch of medicine of which these cases of neurasthenia form an important quota, and having had exceptional opportunities during the past twelve years in a private hospital, with the aid of a large staff of nurses, to study these patients, to observe the various phases of their disease from day to day, to see, in some it is true, a gradual intensity of their symptoms develop until the boundary line was passed and they were transferred to the care of an alienist, or in, I am pleased to say, a much greater number, to observe a

gradual abatement of their symptoms and a return to a life of usefulness, has not only confirmed the belief I had already formed of their gravity, but also led me to believe that by their early treatment, insanity could be prevented, both of which conclusions I had the honor of laying before the Canadian Medical Association in 1898. If I add that such patients have frequently told me that they would prefer to have either pneumonia or typhoid fever to the disease from which they were suffering, some idea of the serious nature of these troubles to such patients will readily be realized.

Before proceeding further I would like to say a few words about insanity, since it is on the field above mentioned that the neurologist and the alienist most frequently meet in the practice of their respective specialties. Although insanity is one of the oldest diseases of which we have any record, how little has been done to alleviate the suffering of the insane, until the last fifty years. If any one interested in the history of insanity were to visit the Asylum of Sainte Anne in Paris, he would there see illustrations of the methods and contrivances with which the insane were treated in the early part of the eighteenth century. The cruelty of these methods and the torture of these contrivances, reminds one of nothing so strongly as of the Spanish Inquisition. When Pinel (one of the brightest minds of his day) cast off the iron fetters from the insane at the Salpêtrière a little more than one hundred years ago, it was hailed as a great advance in the treatment of the insane. This wise and humane act is one of which the whole medical profession may feel justly proud, especially as it was owing to this action that all mechanical restraint gradually disappeared from asylums. When, however, Tuke put into practice the theory that lunacy is a bodily disease, he established a firm basis for the rational treatment of the insane, on which has been built during the last century, all the best remedial measures for the relief and cure of the most serious affliction that can come to man, and thus earned the everlasting gratitude of countless ages yet unborn. Barbarous as seems to us the so-called treatment of the insane in the eighteenth century, there is still one grave defect which exists to-day, and which, on account of its injustice and cruelty, almost makes one wonder if one is not living in the times before Pinel and not in this century of ours. I refer to the fact, that a poor man, however blameless his life, may be arrested, thrown into a common jail with the greatest criminals of the country, and taken before a police magistrate like a common felon. Why? Simply because he has the misfortune to be suffering from a disease of the brain. Had it been a disease of the liver, a much less important organ, an

ambulance would have been sent for him, and he at once would have been given a bed in one of the public hospitals. When one considers that in 1854 (only fifty years ago) there were as many insane poor in chains, in the State of New York, as when Pinel removed the iron fetters in 1792, can one wonder that distrust and suspicion should still exist in the minds of the masses? In the light of these facts, is it astonishing that the laity, without any adequate knowledge of the modern treatment of insanity, should be prejudiced against asylums, and defer asylum treatment for a relative, until the last extremity is reached, when often, alas, it is too late?

But it is to the better education of the medical student, and as a necessary result, that of the future general practitioner, that I would like to direct your attention. As is well known by all examiners in medicine, the graduating student has a most imperfect knowledge of neurasthenia and insanity, a defect which is the more striking when compared to his present knowledge of disease of any other organ than the brain; as, for example, that of the heart. Why should this be so? The medical superintendents of asylums have, for many years, done all in their power to disseminate a knowledge of insanity. One reason is the belief on the part of the student, that there is a chasm of greater or less dimensions between the general practice of medicine and the treatment of insanity, and the impression that the latter must always be treated by an alienist and in an asylum; hence, no practical benefit will be derived from its study. Another is that there is a lack of *realization* on the part of the student that insanity is "brain disease with mental symptoms." Again, the situation of asylums is so frequently a long distance from the scene of the student's daily work, and the immense number of patients and the intricate classification of insanity tend rather, during his occasional visits to the asylum, to confuse his ideas and leave him with an ill-defined knowledge of the subject. But how about his instruction in those functional nervous troubles which often, for a long period, precede insanity, of which Krafft-Ebing (whose work as a neurologist lent a great aid to his success as an alienist), says in his last work, "Seldom does insanity come like a thunderbolt from a clear sky, much oftener its development requires months and even years"? Naturally the student has no such instruction in the asylum since he can see there only cases in which the boundary line of insanity has been passed. As I have already said, his instruction about them in the general hospitals is at best but scanty, owing to the lack of clinical subjects. From what has been said I hope I have made clear that the first step in the prevention of insanity must be taken by providing better facilities for clinical instruction in functional nervous diseases,

for the medical student—the future general practitioner—*under whose care such cases must inevitably first come.*

If lack of education is really the cause, the remedy at once becomes apparent, viz., to increase the facilities for the instruction and study of these diseases. How is this to be accomplished? For some years past three suggestions have been before the medical world: (1) To convert our asylums into hospitals in the strict sense of the word, admitting cases of neurasthenia without certificate. (2) To establish psychopathic hospitals as separate institutions, and (3) to establish in connection with the general hospitals one or more wards, or a separate pavilion, in which these patients could be received. In regard to the first, much as I should like to see in every asylum a well equipped hospital for acute cases, and, firmly as I believe that the worthy efforts of alienists will certainly be rewarded in time, I do not think this solution offers most advantages for the initial step. How would such a hospital be filled with such cases as we are discussing? By voluntary patients, without certification? One can at once see how inadequate must be the supply, if only on account of the prejudice which now exists in regard to asylums. By cases from the general profession? But how is the general profession to recognize the urgent need of treatment in these cases without further opportunity for observation than has been given it in the past? Or, granted that these hospitals were filled with a sufficient number of these neurasthenic patients, would not the distance at which asylums are so often placed form a tremendous barrier to the average student, whose time is already so fully occupied? Moreover, that this distance has to be travelled to see only one class of disease is also an important consideration.

In regard to the establishment of psychopathic hospitals I do not think the suggestion is at present the most useful or practicable one for this country, as the initial expense alone, would delay their construction for an indefinite number of years.

It is rather to the third suggestion above mentioned that I think we must turn for an immediate and practical solution of the difficulty, a solution which I advocated at the annual meeting of the Ontario Medical Association in June last, viz., the establishment of wards or a separate pavilion in connection with general hospitals, and especially at first, in connection with those general hospitals where clinical instruction is constantly given. Has this plan been tried and with what success? To any who have not yet seen the report of the last annual meeting of the Neurological Society of Great Britain and Ireland, with the address by its president, Sir John Batty Tuke, M.P., which is devoted in part to this subject, I may say

it will be found most interesting. He cites the experience of Glasgow, which was the first city in the United Kingdom to carry such a scheme into effect. In 1890 one parish, the Barony, instituted what were termed observation wards for the reception of so-called "nervous cases." Notwithstanding that the general arrangements were not suitable from a hospital point of view, the results of the experiment were generally satisfactory. Encouraged by these results a second stage of the experiment took place in 1899 on a much larger scale, in wards set apart for the purpose in one of the city hospitals. Satisfied further with these results, in June, 1904, wards were erected for the special purpose, a pavilion attached to one of the general hospitals. Time forbids further details, in regard to the successful results, which have attended this experiment to provide early hospital treatment for the poor suffering from this disease. I would like, however, to quote what he says about the value of these wards for clinical instruction: "Clinical instruction in an asylum was all very well, but it was not worth argument, to show the infinitely greater advantage that would accrue to all students, were such wards open to them." This institution in Glasgow is the only one of its kind in Great Britain. In Germany much more has been accomplished. To each of the twenty universities a psychiatric clinic has been attached, either in buildings, independent, in the neighborhood of a general hospital, or in wards specially devoted to the purpose. That of Heidelberg was established in 1878. All alleged to be mentally unsound passed through these hospitals; if the nature of the case demanded certification it was passed on to the asylum; the rest consisting of early or mild cases of insanity, neurasthenia, the subjects of delirium due to fever, etc. —in fact, all such cases demanding observation and treatment— were retained without certification and treated to a termination without being reported to the State Office. These clinics were on exactly the same footing as the other clinics, medical and surgical, existing in all German universities. Similar provision has been made in the United States, especially at Bellevue Hospital in New York, and in Philadelphia; while France, Austria, Italy and Switzerland have likewise demonstrated the efficacy of this procedure.

To establish such a ward in connection with a general hospital would have the important advantage that, as the financial outlay need not be large, it could the sooner be put into active operation, a very material consideration. With one or more of such wards in operation the first object aimed at, viz., the alleviation of suffering in the poor by proper hospital treatment for their disease, would be attained. In addition to this, there would result at least the following:

1. Better clinical instruction to the medical student. Here the student could be shown these cases in his daily round of work, and be able to study these diseases of the brain just as he studies, in a neighboring ward, diseases of the heart or of the lungs. He would learn to give the same attention to disease in this one organ, as he now gives to disease in all the other organs, and the importance of the study would be brought home to him in a way which is at present impossible. He would realize the importance of active treatment in these cases and his responsibility in allowing these cases to pass over the boundary line of insanity without advising adequate treatment. The study of these cases in their early stages would also enable him to recognize such conditions in private practice, and to take such steps as may save a mind from destruction, a result more desirable even than saving the body.

2. A better knowledge of these diseases would result in the whole profession recognizing the necessity, for example, of hospitalization of asylums, and instead of the scanty number of specialists who are now endeavoring to bring about this good work, there would be a solid phalanx formed by the profession to the requests of which the government would be obliged to accede without delay.

3. To the nursing staff of a general hospital, instruction in such wards would be a great boon, since, frequent as these cases are in private practice, but little opportunity to learn the art of nursing them is afforded in a general hospital. As Church, in his recent work on Nervous Diseases, says in regard to the nursing of neurasthenia, "Any amount of general hospital training does not make a good nurse for this class of patients," hence the importance of further experience in nursing this form of disease.

4. By admitting patients into the wards of a general hospital on the lines suggested above, in Germany, any acute case of alleged insanity would at once be admitted without a certificate, on precisely the same conditions as though the patient were suffering from any other disease than that of the brain, and by this means the cruelty and injustice of taking these patients to a jail would be abolished. Under these conditions recourse to early treatment would be sought, since the prejudice against asylum treatment for a relative would be removed, and much better results would necessarily follow. The stigma, in the minds of the laity, of having been treated in an asylum would also be obviated. Further, the treatment of these patients in a general hospital, by the same methods as all other patients are treated (due allowance being made for the form of their disease), would gradually lead to a more rational view of insanity in the minds

of the masses, and thus gradually overcome the prejudice against asylums.

5. A large proportion of suicides would be prevented since there is no doubt that many a sufferer from neurasthenia, who has without avail long sought aid to relieve him of his disease, has ultimately given up in despair, and some additional grief which in health would only have caused temporary depression, has under the circumstances turned the scale, and another suicide is added to the appalling list of those disasters published daily in the newspapers.

From an economic point of view the prevention of insanity in the poor merits the most careful attention of the State. Statistics at present are necessarily scanty. The results of the experiment in Glasgow were as follows: Between 1899 and June, 1904, 1,345 persons were admitted, of whom 1,052 were discharged recovered or relieved. Between June and December of last year 260 persons were admitted, of whom 155 were discharged recovered or relieved. As a result of twelve years' experience in a private hospital for nervous diseases, provided with all necessary facilities for treatment, but to which cases of insanity are not admitted, the proportion of recoveries, in those patients whose disease would, in all probability, without treatment have passed over the boundary line of insanity, has been about 80 per cent. Granted, however, that insanity was prevented in only 50 per cent of the patients admitted into such wards as I have suggested in a general hospital, what an excellent investment the cost of such wards would be to the Government. There is at present in one of our asylums, at least one man, the cost of whose maintenance has already been paid by the Government for more than fifty years. Had insanity been prevented in this single instance, and to the money thus expended by the Government for his maintenance, be added the value of his services as a wage-earner during this long period, the amount thus saved from this one patient alone, would more than suffice to build and properly equip a pavilion in connection with one general hospital. I shall not add further details, but I hope sufficient has been said to direct attention to the urgent need for the early treatment of neurasthenia to prevent insanity in the poor, by means of well-equipped wards in a general hospital, the accomplishment of which will add another laurel to the profession which has ever made the relief of the suffering of the poor its first duty.

TOXEMIA OF PREGNANCY.*

BY KENNEDY C. McILWRAITH,
Associate in Obstetrics, University of Toronto.

The subject of eclampsia has been so often dealt with, and there is so little that is new to say about it, that I feel as though some apology were due for introducing the subject.

Sir William Gowers, in writing on aphasia many years ago, used words which apply with equal force to eclampsia to-day. He says: "The subject abounds in difficulty, arising partly from its complexity and partly from the uncertainty due to a deficiency of facts, and the obscurity produced by a redundance of theory." A complex subject, deficiency of facts, redundance of theory—all this may be said of eclampsia. I have notes drawn from an observation of twenty-three cases to lay before the Society, and the hope of adding to the clinical knowledge of the question forms my apology. I shall not now give complete statistics of these cases, for the time at my disposal is too short, but shall refer to certain features which seemed of special interest. Convulsions occurred in only nineteen of them, and I have included the other four in order to cover that very important part of the subject—prophylaxis.

It is, I think, a noteworthy fact that in every case *some* premonitory symptoms occurred, and the only deaths I have to record occurred after these warnings had been neglected. The premonitory symptoms recorded in my notes are as follows: Headache, edema, vertigo, drowsiness, ringing in the ears, albuminuria, visual defects, high tension pulse, scanty urine, severe epigastric pain, jaundice, hemorrhage from the gums. Of these the most frequently noted are: Edema, 13 cases; headache, 12 cases; albuminuria, 9 cases; high tension pulse, 5 cases.

Edema.—I think edema is given a somewhat fictitious prominence in comparison with the other symptoms. It always attracts the patient's attention, and is therefore nearly always recorded when present. Furthermore, it occurs very frequently in primiparæ as a pressure symptom, especially at the time the head first engages in the brim. Produced in this way it does not seem to point specially to danger of eclampsia. Finally, some of those cases in which it was the most prominent symptom were not otherwise severe. One woman, for example, who had general anasarca, and an edema of the vulva so great that the labia had to be punctured before the child could be delivered, did not have convulsions. Still the presence of edema should always put us on our guard.

Headache.—Persistent and severe headache, either frontal or

*Read at a meeting of the Toronto Clinical Society.

vertical, is a very important sign. In at least two of my cases its incidence preceded the convulsions by only an hour or two. It would seem to be an urgent indication for treatment.

Albuminuria.—In speaking of this symptom, the necessary imperfections of this record must be borne in mind. The majority of the women were hospital patients, brought in in convulsions, the urine not having been examined previously. In only one case in which the urine was examined shortly before convulsions set in was it absent. It is probably a more frequent premonitory symptom than my record indicates, and its presence should always put us on our guard.

High Tension Pulse.—Great difficulty in obliterating the pulse at the wrist is a most important warning. In recording the earlier cases of this series I was not sufficiently alive to the importance of this symptom, or it might have been more frequently noted.

Latterly I have never found that a patient who has had one or more convulsions is out of danger while this condition exists. The tension is nearly always low immediately after a convulsion; rises again and reaches a maximum just before another convulsion. The disappearance of this symptom is usually coincident with the disappearance of all other unfavorable symptoms. This, however, is not always true when the tension is lowered by the administration of such remedies as nitroglycerine, or veratrum viride; and, finally, in the most severe cases of all, the pulse was rapid and of low tension from the time the patient was first seen. This may possibly be the ultimate effect of the same poison, which at first produces the high tension.

Visual Defects.—Only one of my patients suffered previous to confinement, and she did not have convulsions. Her history is that she suffered from "blurring of vision" in the right eye, headache, albuminuria and edema from about the third month. The blurring and albuminuria improved under eliminative treatment, but did not entirely disappear until about the third month after delivery.

Severe Epigastric Pain.—This occurred in one patient seen in consultation in a private ward at the Burnside, November 27th, 1902, quartipara. Her history was that up to about 2.30 p.m. she was quite well. Telephoned to her husband at that hour on a matter of business. At about 3 p.m. she was seized with a severe pain in the abdomen. At 7 p.m. she had a convulsion. Before 10 30 p.m. she had had two more. She had a fourth on entering the hospital at 10.40 p.m., at which hour I saw her. She was then comatose, cornea insensitive, pupils contracted to pin-point size. The pulse was feeble and rapid; labor pains were present, and the os larger than a silver dollar. The dilatation was completed under chloroform and a dead child delivered.

She never rallied in the slightest degree, and died at 3 a.m. The case was remarkable for the extreme coma, feeble pulse and fatal result after only four convulsions. It has been stated that cases in which epigastric pain occur are usually severe. In this case I suspected cerebral hemorrhage, but could not get an autopsy.

I may add that when first seen by her physician she said she had noticed edema of the legs and scanty urine for some days.

Jaundice.—This occurred ante-partum twice, and post-partum twice. It is of interest in connection with the hepatic theory of origin of the disease.

Having thus briefly discussed the premonitory symptoms, I pass on to consider their treatment. Two lines of treatment were followed: Elimination by means of calomel and mag. sulph. and normal salines; and the administration of morphia or chloral when a convulsion seemed imminent. Glonoin was given to lower pulse tension.

One patient was admitted to the Burnside at about the sixth month of pregnancy. Her symptoms were headache, vomiting, bleeding from the gums, sleeplessness, scanty, bloody, albuminous urine, and high tension pulse. She was purged with calomel and mag. sulph. and given normal saline per rectum, one pint every four hours. Morphia was given for the headache and sleeplessness. Under this treatment she improved wonderfully. The urine increased in quantity, and the blood disappeared from it. All her other symptoms ameliorated. Glonoin was given to reduce the pulse tension. She improved so much that she refused to remain in bed, and then insisted upon going home, when the treatment was not continued. She miscarried; a convulsion occurred; she developed a phlebitis, which involved both arms. In this condition she returned to the Toronto General Hospital. She finally recovered. The four patients in whom no convulsions occurred were similarly treated, and that is possibly the reason that they escaped.

The eliminative treatment is calomel in ½ grain doses every half hour till three grains are given; then mag. sulph. one ounce of the saturated solution every hour till four are given, or until the bowels move freely. Treatment by saline purgation can be kept up for weeks, *e.g.*, Case 4. This girl had eight convulsions, and was then purged more or less for fifty-three days, when labor came on, and she was delivered of a healthy child.

Causes which Excite Convulsions.—Any sort of external stimulation may excite a convulsion in a patient who is in the eclamptic state.

In Case 3 (post-partum) a convulsion was excited by pump-

ing the breast. She was not finally cured until she was isolated and kept absolutely quiet.

In Case 11 a convulsion was precipitated by administration of a dose of medicine.

In Case 23 it was brought on by the presence of students at a labor in a neighboring room.

And finally, it is quite the rule for a convulsion to come on while the patient is being moved from the ambulance to the ward.

Treatment.

Believing, as I do, that the pathological condition is one of toxemia, I take it that elimination is the *curative* treatment, other measures being directed to the control of special symptoms. The treatment that I have laid down for my hospital cases is as follows;

1. *If the Patient be Conscious.*—Give calomel grs. 5 at once, washed down with saturated solution of mag. sulph. two ounces. It takes too long to give divided doses when a convulsion occurs. Then anesthetise the patient and give an injection of sterile normal saline, one pint beneath each breast, and at the same time let the nurse give an enema, consisting of mag. sulph. saturated solution, one ounce; glycerine, two ounces; water, three ounces; as high up in the bowel as possible. Then as the patient comes out of the anesthetic, give a hypodermic of morph. sulph. grs. ½. Then give alternately chloral grs. 30 per rectum, and morph. sulph. grs. ¼ hypodermically at two-hour intervals, as seem to be required, for convulsions or threatening symptoms. Not more than three grains of morphia should be given in twenty-four hours.

2. *If the Patient be Unconscious.*—Same, except that the medicines cannot be given by the mouth. This is as far as the treatment can be systematized, but varying conditions may lead one to vary the treatment in each case.

It has been noted on several occasions that the convulsions ceased and the other symptoms disappeared before the bowels started to move. This, I take it, is due to serum, and with it toxin, having been withdrawn from the general circulation into the bowel, and remaining there owing to failure of peristalsis. The glycerine enema usually excites peristalsis.

In addition to morphine and chloral, veratrum viride proved valuable. In one case of post-partum convulsions which would not yield to other measures, a hypodermic of 20 minims of the fluid extract was immediately effectual, and the patient recovered without further convulsions. I would not use this remedy at all except where the pulse was full and of high tension, and

I do not think I would use this heroic dose again. Injections of 5 to 10 minims t. i. d. is a better method.

In a recent number of the *British Medical Journal*, Dr. Nicholson, of Edinburgh, strongly recommends thyroid extract as a means of combating high pulse tension. I shall give this remedy a trial should occasion again arise.

If all these methods fail, delivery must be accomplished, and if labor be present and the cervix taken up, it should *always* be proceeded with.

In Case 23 labor was not present and the cervix was not taken up, yet I was able to dilate the cervix manually (Harris's method) and deliver a living seven-months' child. The mother wandered mentally for about a week, and had two or three post-partum convulsions, but ten days after delivery she was all right and able to sit up.

In all cases we should remember that our patient may do well enough for a day or two without food, but water is absolutely necessary. This should be given by the bowel while she is unconscious, and by the mouth—milk and water—when she can drink.

A word may be said about "controlling the convulsions with chloroform." We must remember that a convulsion seldom lasts longer than five minutes. The first stage of it is tonic, and during that stage what the patient urgently needs is oxygen —a remedy strongly recommended by Stroganoff. To this stage clonic convulsions and deep spasmodic respirations succeed. In this stage the administration of chloroform deprives the patient to certain extent of much-needed oxygen, and she is moreover very apt to get too much chloroform. I have seen two or three ineffectual attempts to "check" convulsions in this way. If a patient is having a series of convulsions, chloroform may be given to break the series while eliminative measures are being taken, but this should be its sole function. The prolonged administration of it is exceedingly dangerous.

CONVALESCENCE.

After convulsions had ceased, fever developed in five cases, mania in one, wandering intellect and delusions in one, and hemiplegia in one.

With continued elimination and attention to the other points of treatment I have mentioned, the first two recovered completely.

Hemiplegia developed in a patient whose convulsions came on after delivery. The convulsions ceased on the third day after delivery, and the hemiplegia developed on the fifth. It involved the face, arm and leg of the right side. Speech was also affected. This was on July 2nd last. She has now recov-

ered the use of her tongue completely, and of her arm and leg pretty well.

My experience does not bear out the often repeated statement that convulsions occurring post-partum are less serious than those occurring during pregnancy and labor. Two of the worst cases in my series were post-partum cases.

Results.—There were two deaths. One history I have already given. In the other case the woman's physician was out of town, and time was lost trying to get another. She began to have convulsions about 7 a.m., and, according to her friends, kept on having them all morning, nothing being done. At 2 p.m. she was brought to the Burnside in labor, profoundly unconscious, pulse rapid and feeble. She was quickly delivered under full anesthesia, but never recovered consciousness, and died at 11 p.m.

Prognosis.—Profound coma, rapid feeble pulse, and pulse of abnormally high tension are of bad significance. When the circulatory balance is well maintained and consciousness is recovered in the intervals of the convulsions, recovery may be looked for when free elimination can be established, excepting always the danger of hemiplegia. This latter danger should always be mentioned in giving a prognosis. My experience would seem to indicate that profound coma is of more serious import than recurrence of convulsions when periods of consciousness intervene.

In conclusion, let me enter a plea for the better care of pregnant women. In my private practice I explain to every woman who engages me to attend her what my fee will be, and that this will cover all ordinary consultations on the subject of her pregnancy. I encourage her to come to me at stated intervals to "report progress" and have her urine examined. This is in part the plan recommended by Cooke, of New York, and I think that by its adoption I have prevented some cases of eclampsia.

Most of the cases on which this paper is based were from Professor Wright's clinic at the Burnside, where the treatment by morphia and elimination has been followed for some years. The rest were seen at St. Michael's Hospital and in consultation practice.

Since the above paper was written I have seen several eclamptic patients. I have tried thyroid extract in doses of from 15 to 20 grains daily, and think that it has a vaso-dilating effect, but have come to no definite conclusion as to its usefulness. Two more of the patients had no albuminuria previous to the onset of convulsions. One post-partum patient died in a state of profound coma after two or three convulsions. Five minims of croton oil failed to move the bowels. Her temperature just before death was 108.

54 Avenue Road.

HOME TREATMENT OF PULMONARY TUBERCULOSIS—CASES IN PRACTICE.

By EDWARD PLAYTER, M.D., Toronto.

No. II.

Having in the February number of the PRACTITIONER given in sufficient detail the general principles of treatment of this disease, I now need only refer to two or three points then overlooked or not fully or clearly given.

It may be well, too, to repeat that the greatest care must be exercised in the commencement of chest expansion by lung exercises and increase of respiratory capacity, without which patients, in the second or third stage especially, cannot recover; more oxygen than they have been habitually taking in being indispensable to recovery. And never, in one single instance, in my experience, has any bad effects, but on the contrary, incalculable, absolutely essential good, resulted therefrom. It is obviously a much safer practice than that of sending patients to mountain elevations. In a very few cases I have thought it safest to restrict action of the diseased lung by some local strapping of the chest wall.

Cough, whether too irritating or with too copious expectoration, or tight with tenacity, may always be controlled, never, of course, to be stopped, by simple inhalents—menthol, eucalyptus, tr. benzoin co., etc., and with the simplest inhaler—an open-mouthed bottle with two small glass tubes through the cork, one into the liquid. Care must be exercised at first, that the patient do not inhale too strongly and draw the liquid into the mouth.

Direct laryngo-intertrachial injections of such essential oils, with ol. cinnamon, creosote, iodoform, etc., according to the indications, in olive oil, are sometimes of decided advantage.

Theoretically, ozonized air should be a most valuable means of introducing oxygen into the system, and from the published experience of Dr. Arthur Ransome, I had expected much from inhalation of it. With the best of apparatus for production and inhalation, I have been rather disappointed, though in some cases in my experience it has been beneficial.

The morning tonic bath—a very valuable remedy—needs special mention. Whether after the morning warm wash-off of the night inunction or not, it promotes healthy, vigorous action of the skin, aids respiration and prevents "taking cold." It must not be too cool to prevent good after-reaction. Cold or temperature here being entirely relative, the patient's feelings

must guide. Beginning with water comfortably coolish, the temperature may be lowered half a degree daily (Ziemssen) a quick rub, with quick drying and friction; in advanced cases, help being needed.

In no disease is it more important that the patient carry out strictly every detail in the treatment laid down by the physician.

The body temperature, I may add, rarely guides me, excepting sometimes in diagnosing early or pretubercular cases. I find no typical cases, and rarely use the thermometer, the pulse and the many other general conditions having proven safer guides in my practice.

In conclusion on general treatment—in a sentence—the supply of oxygen must be increased by improving the respiratory condition of the fairly healthy lung tissue left, while every function of the body must be put into as good working condition as possible—of the skin, for example, assisting as it may in nutrition as well as in respiration, as in the case of Miss M—— (Case 1), by inunctions of cod liver oil; and so with all the other functions—nutrient, secretory and excretory. The amount of exercise must be judiciously regulated according to the condition of the circulation. In a few words, advantage must be taken of every possible means for restoring the natural powers that are left to more natural, vigorous action, placing the patient in the best possible condition for recovery.

Hence a most careful, prolonged examination, and after-study of the case before laying down the course of treatment. No two patients can be successfully treated alike. Some modification is invariably indicated; as, for example, in some cases, so small a thing as a little excess of, or on the other hand, too little aloin to help regulate the biliary and intestinal functions, may give rise to a marked effect, good or bad. So it is with almost every remedy.

In a very few cases, the general functions are not yet much disturbed and little is needed but more oxygen with, perhaps, rest and some counter irritation, or "alterative," as iodine inunctions. But the great majority of patients need much help; in which the patient must be taught to assist the physician, and in a large measure, if recovery is to be brought about.

Finally, no time should be lost before commencing treatment, not a day in at all advanced tuberculous casee. Every day so lost lessens the chances of the patient's recovery.

CASE III.—Rev. E. A. W. D——, æt. about 30, was, six or seven years ago, stationed in connection with a Methodist church near Lakefield, County of Peterborough. During the year 1889 his health failed, and in the summer and autumn failed rapidly, with copious pulmonary hemorrhages. In the

autumn he tried to get into the Gravenhurst Sanitarium, but the medical examiner in Toronto refused to "pass" him for admission, as he told me, the disease having advanced too far. He then resided with friends in a Toronto suburb for many weeks, under the treatment of two or three physicians, in a large double parlor, mostly in bed, too weak to go about.

He came under my care on the first of February, 1890, greatly emaciated and prostrated from weakness, not able to walk up one flight of stairs; much shortness of breath, even in quiet conversation; pulse, average frequency for weeks, 115 to 120; respirations, 33; had for weeks vomited most of his food; had been taking five or six raw eggs a day for two or three successive days, then unable to take but very little food of any sort for several days, because of persistent vomiting; bowels very irregular; no characteristic diarrhea; much cough and expectoration; hemorrhages frequent now, of only a few spoonfuls. The left lung was a tuberculous mass; hardly any movement of the chest wall on this side; no respiratory murmur, universal dullness, except semi-dullness, where several cavities had been formed. The right lung, except at apex, was not much amiss.

Treatment: Prolonged rest in bed, between two open windows when indoors; when weather permitted, and later, during spring and summer, out on balcony or on the grass under canvas; diet of beef, milk, cream, soon one egg or more a day. He had no vomiting whatever while under my care, nor diarrhea (though for a long time the eating of two or three strawberries even would cause uneasiness and relaxed bowels); took only malted milk for first two or three days, thus allowing the stomach an almost complete rest; then, allowed, gradually, the usual nutritious diet, simple remedies being given to restore more healthy general functional action.

In a few days, respiratory exercises (simply deep breathing) were carefully commenced and persistently continued, without the slightest increase of bleedings, which, on the other hand, gradually abated as the lung tissue became toned up by the cool, fresh oxygen, and in three or four months entirely ceased. Unguent. iod. co. was rubbed freely into the skin of the diseased side, from sternum to spine, every night throughout the whole course of treatment, followed by the warm morning wash and the cool tonic bath and rub. The cough was always easily controlled by soothing, expectorant, or astringent inhalents, according to its nature and the indications, with the ordinary simple inhaler. Inhalations of ozonized air were tried from time to time, but in this case seemed to irritate, both locally and generally.

At the end of eight or nine months, Mr. D——, with a strong

will, adhering strictly to every detail of treatment, was a pretty well man. A friend then who had not seen him for months, seeing him walking, and talking with him, remarked: "There doesn't seem to be anything wrong with you now"; nor did there. After a few months spent in Ontario county he went to his parents in Newfoundland.

He is now, from reports, practically as well as ever, to say the least. In June of 1904, a friend of his said, "He was quite able to preach again." This, in accordance with my advice, chiefly because of the foul air of churches, he has not done, but has been engaged mostly in literary work, outdoors, in camp.

CASE IV., WITH A WARNING.—Miss M. E——, of Oshawa, æt. 27, came under my care in October, 1891. Had been failing in health during many months; tried to get into the Gravenhurst Sanitarium, but the medical examiner in Toronto considered her disease too far advanced to be admitted into that institution, so she reported.

She was a good deal emaciated and weak; had considerable cough, with shortness of breath; respirations, 30 per minute; pulse for a long time constantly over 100, and much constricted respiratory capacity. She was not, however, so bad in these respects—not so prostrated—as in the case of Miss M——, reported in the February number of the PRACTITIONER.

The left lung was extensively diseased, more so than the general conditions would indicate; no natural respiratory murmur in any part, moist, persistent rales, partial or complete dullness, clavicular region retracted with vocal fremitus; well-defined cavity of considerable size in middle lobe; no hemorrhages; right lung in fairly good condition; respiratory murmur, general, though exaggerated, especially in upper lobe; some rales, no dullness.

The treatment: Lung exercises, very gentle at first, for increase of the respiratory capacity, getting more oxygen into the blood, to utilize the fair amount of food she was yet able to consume, *i.e.*, *more* oxygen, without which, as I have said, patients in the later stages cannot recover. She inhaled ozonized air, with its greater measure of oxygen, from fifteen to twenty minutes, three times a day, with apparent benefit; diet carefully adapted, from time to time, at first, from day to day, to the digestive and assimilative powers; including the usual essentials—beef, eggs, milk and cream, with sanguis boum; very little exercise; general inunctions of cod liver oil and creosote at bed-time, for some weeks, then strong iodine ointment freely over chest, front and back, and the morning wash and tonic bath. During January and February I gave daily laryngo-trachial injections of ol. eucalyp. with creosote in olive oil, with an ordinary silver catheter, the patient leaning a little

toward the left; this, with the special view of improving the condition of the cavity. During the first seven or eight weeks I strapped the central ribs of the diseased side to prevent too much distension of the large cavity by the deep inspirations.

Miss E—— went home the latter end of May, not cured, but a vastly improved woman, taking with her a supply of sanguis boum, and later sending for more. From reports she continued to improve in every respect satisfactorily during the following year, and appeared to be quite restored to health. In the spring of 1893 she worked a great deal at gardening, it appears as vigorously as ever she worked at anything. In the evening, after one full day's work, she attended an entertainment, going home about eleven o'clock, without feeling anything amiss or even tired. Toward morning she wakened her mother, who found her bleeding alarmingly from the lungs, from which she died before the dawn.

Contrary to my special instructions to all such patients, she had overtaxed her physical powers, strained the yet tender lung tissue. I enjoin all such patients not to consider themselves well, however they may feel, for at least two years after a good start on the road to recovery.

Much use of the upper extremities promotes a greater flow of blood to the lungs, and hence increases the risk of hemorrhage.

One of the worst cases of this I have known was that of one D. McK——, who came direct from British Columbia to consult me. Years before, residing in Ottawa, apparently in good health, he had indulged a long time in the familiar exercise of playing fisticuffs with a loosely suspended bag filled with bran. A most profuse hemorrhage soon followed, tuberculosis developed, and he went west with the vain hope of thereby receiving benefit.

Under my care is now a case in which slight hemoptosis comes on if the patient engages in work which brings much into use the upper extremities.

Clinical Notes.

A CASE OF FACIAL ERYSIPELAS COMPLICATED WITH LABOR: TREATMENT WITH ANTISTREPTOCOCCIC SERUM. RECOVERY.

By A. R. HANKS, M. D., Blenheim, Ontario.

The case I herewith report has been of such intense interest to me that I publish it with the hope that my experience will encourage some brother practitioner in the hour of dire necessity, when he feels the battle is against him.

Clinical History.

Mrs. W. H. E., aged 28 years, multipara, eight months pregnant, on the evening of December 24, presented a well-marked erysipelas of the nose and left side of the face, the left eye being swollen nearly shut, and the rash extending from the alæ of the nose, on the left side, over the left face nearly to the ear, and across the foot of the nose beneath the right eye. Blebs appeared on the left side of the nose and eyelid. The patient stated that she had not felt well for some months and complained of apthous sore mouth. She had had chilly sensations for the past three days, alternating with fever, and a feeling of fulness, and burning in the face, at the seat of the fiery rash, which was very tender to touch Headache, pain in the back and limbs, coated tongue, a temperature of 102.5° and a pulse rate of 120 were noted.

The next day both eyes were swollen completely shut so that the patient could not see at all. The disease was extending up the forehead, its margin being marked by a distinct ridge which advanced as the eruption spread. It also extended over the right side of the face which possessed a brawny feel. The tongue became dry and brown in the middle, and the patient was very delirious, passing urine frequently, though scantily but it contained no albumen. The pulse-rate was 120, and the temperature 104°.

December 26. The disease had extended up the forehead and to the right ear, but did not involve the ear. The symptoms were in no way ameliorated, the temperature being 105°. During the night the woman was taken in labor, the baby being born about 7 a.m. on the 27th. At that time her temperature was 103½°, and the pulse-rate was 110.

December 27. The erysipelas had extended to and beyond the roots of the hair on the forehead, and covered the whole face, from ear to ear, and above the lips, which were extensively

involved. The swelling of the parts first involved was now showing signs of subsiding, though extending at the margins. The tongue was still very dry and brown, the bowels were loose and the patient was very delirious.

December 29. The patient can open her left eye a little. The erysipelas had extended to the left of the mouth, and the lower lip had become involved. The right ear and the right side of the head were involved and much swollen. The tongue was still dry and brown, though the delirium was less.

December 30. The right ear was enormously swollen, but no fresh territory had become involved. The tongue was now cleaning and becoming moist. The delirium had disappeared, the appetite was returning.

December 31. The restlessness was gone, the flow of urine was abundant; the disease was not spreading.

January 1, 1905. The left ear and the left side of head, which were still involved, assumed the normal appearance three days later. Urine scanty.

January 2. Retention of urine occurred, the secretion was abundant when drawn off by the catheter, a process we were compelled to continue for three days. The tongue was now clean and moist, the appetite good, but the face, ears and lips, were still much swollen.

January 5. The right ear is somewhat swollen still, and the eyelids show ulceration from superficial abscesses. The patient feels well except for her sore mouth; she urinates voluntarily, again.

General Remarks on Treatment.

We have been taught that the streptococcus which produces erysipelas is the same organism that commonly causes septicemia after labor, and that the germs cling to clothing and hands with such tenacity that, as Osler puts it, you should never attend a case of confinement while treating a case of erysipelas. Here a patient, already three or four days ill with a severe facial erysipelas, dry, brown tongue, active delirium and enormous swelling of the face, with a temperature of 105°, a pulse-rate of 120, is taken in labor and must be protected from streptococcic infection.

How to accomplish this task in a house already germ-laden, and from which the patient's mother, her servant, and her nurse had, during her illness, to be sent to their respective homes, each suffering from a follicular tonsillitis, due to unsanitary surroundings, was a question the favorable solution of which was of vital importance to the patient.

Aseptic midwifery is an ideal we all worship, but to rest content with the strictest asepticism under circumstances such as these would probably have resulted in the death of the patient a few days later from septicemia.

When the labor was well advanced, but previous to delivery, the thighs, buttocks, and vulva were given a good antiseptic scrubbing, and a large sterilized pad was placed over the vulva, no vaginal examination having been made at any time. The patient was completely disrobed and carried to a bed farthest removed from the room in which she lay, while fresh clothing and bedding were used. A large wad of sterilized cotton was kept constantly applied over the vulva, the nurse using sterilized rubber gloves to change the dressings and sponge the vulva with antiseptic washes.

Antistreptococcic serum (P. D. & Co.) was used liberally for the double purpose of protecting the patient against infection and arresting the progress of the erysipelas, both of which it accomplished admirably.

Within twenty-four hours after beginning the administration of the serum, there was a decided effect, first upon the pulse, then the temperature, condition of the tongue, and delirium. The baby was born on the 27th, and three doses of serum were given on the 28th, when both pulse and temperature went down; at this time the serum was being used every six hours. On the 29th, three more doses were given every six hours, and, as the delirium and temperature were declining, the interval between doses was lengthened to eight, and then to twelve hours, so that in four days after, twelve doses of serum had been given, the temperature was subnormal never to rise above normal.

The only unpleasant symptoms were retention of urine, which lasted three days, and the subnormal temperature for a few days.

The erysipelas continued to spread for four days after the first administration of the serum, even though the constitutional symptoms showed an improvement, and I am not prepared to say the erysipelas would not have pursued as favorable a course if serum had not been used, but I think from experience previously had, that it would not, and I certainly will use it in my next severe case of erysipelas; but it is of its protective influence I wish especially to speak.

This patient was debilitated to such an extent that she was suffering from apthous sore mouth. She was surrounded by such unhygienic influences as to develop a severe erysipelas. Three inmates of the house contracted follicular tonsillitis (a streptococcic infection) though there were no other cases in the section, so that one would expect little resisting power in the patient at the time of labor even without the proximity of so contagious a disease as erysipelas. While due precaution was adopted to prevent germs finding entrance to the vagina, I cannot think the parts escaped contamination under all the circumstances.

There was no pelvic involvement, and the patient made an excellent recovery.

This is an example of serum conferring immunity against infection, and of its value in this field I cannot speak too highly.

As a curative agent in infection following labor the results have been variable in different experimenters' hands. It may be because of delay in administration, or it may be due to insufficient persistence in its use, but as a prophylactic there can be no doubt of its efficacy. Vaccination furnishes immunity but is not curative; antitoxin furnishes immunity and is also curative, but it must be administered early in the disease and in sufficiently large doses. No fact is better established than that the efficiency of antitoxin is in direct proportion to the earliness of its administration, and if antistreptococcic serum is a prophylactic, as this case seems to indicate, it seems reasonable to assume it to be equally as curative as antitoxin if it be prescribed sufficiently early and in sufficient doses.

INQUIRIES AND REPLIES.

"CASE IN PRACTICE.—March 20th, primipara, age 22; expects to be confined April 10th; has had slight albuminuria for some time, but this has steadily grown worse lately. There are also abundant hyaline and epithelial casts, arterial tension high, urine scanty and loaded with urates at times; there is frequently headache, some swelling of the limbs. Has occasional attacks of pretty severe pains in the region of the epigastrium, and some vomiting. She is on a milk diet largely, and the skin and bowels are being kept active. I find that nitro-glycerine increases the flow of urine and lessens the arterial tension. I have started giving her thyroids, which I see recommended for this condition. Do you advise this form of treatment? Would you advise induction of premature labor, or watch her closely and try to carry her along? She says that she feels pretty well, except when she has attacks of pain in her stomach. In the event of eclampsia, would you advise rapid emptying of the uterus, or endeavoring to control the convulsions, and endeavoring to eliminate the poison?"

The general plan of treatment is correct. As there appears to be acute nephritis, a "largely milk diet" will answer, at least for a time. In many cases a more generous diet, such as that now recommended for chronic nephritis, is better. A daily warm bath is probably sufficient to keep the skin acting. The hot pack used by some is weakening. In carrying out the eliminative treatment calomel should be used in fairly large quantities, followed by epsom salts or other saline cathartics in

sufficient quantities to produce three to ten watery evacuations during twenty-four hours. This is practically the treatment carried out by our fathers for toxemia of pregnancy. Nitroglycerine accelerates the pulse and relaxes the arteries and arterioles, but sometimes causes headache. Care should be used in administering it, and the serious mistake of giving it when the arterioles are relaxed should never be made. With respect to the administration of thyroid extract, many of us think that the results in organorthopy have not fulfilled expectations. Thyroid preparations appear to have value in the treatment of myxedema and goitre, and also, I think, in some cases of toxemia of pregnancy, when the edema of the extremities, especially the ankles, is hard, and myxedematous, with scanty urine and high tension following. Its indiscriminate use in the toxemia of pregnancy by a large portion of practitioners, has probably done much harm. It should never be administered except to the strong and robust, because it is apt to reduce the patient's strength materially, the most important symptoms in such a case being loss of weight, shortness of breath and a weak and rapid pulse.

It is difficult to advise as to the induction of premature labor. In the majority of cases it seems better to carry the patient on to full term. If, however, notwithstanding active treatment, the patient grows steadily worse, an operation is sometimes advisable. After the occurrence of convulsions the treatment should be two-fold, administer morphine, etc., to control the convulsions and help nature to empty the uterus. In certain cases when there is no dilation of the os, the convulsions may be controlled and the patient allowed to wait for the advent of labor. In many cases it is a somewhat simple matter after the patient has morphine and chloroform to dilate the os and empty the uterus.—Ed.

"Case II.—A young girl, aged 17, menstruates every fourteen days, causing considerable weakening. She also has incipient tuberculosis. Have endeavored to check the hemorrhages but have failed, so far. Can you give me any advice?"

There is no specific which will control the hemorrhages under such circumstances. General constitutional treatment is required. The open-air or sanitarium treatment for tuberculosis would be most suitable in such a case, the patient being kept quiet during her periods, and receiving some preparation of ergot with viburnum prunifolium.—Ed.

Question III.—"What axis-traction forceps do you prefer?"

For many years I used the Milne-Murray axis-traction forceps, but during the last three years I have used the Porter-Mathew instrument, which is really a modification of Milne-Murray's forceps, but is lighter, has better shaped blades, and occupies less room in the obstetrical satchel.—Ed.

Selected Articles.

OBSERVATIONS UPON ANTERIOR METATARSALGIA, WITH NOTES ON SEVEN CASES.

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In 1876, T. G. Morton,[1] of Philadelphia, described a series of cases characterised by recurrent pain in the region of the fourth metatarsophalangeal articulation. The pain was usually severe and cramp-like, and spread from the articulation, both down the toe on to the dorsum of the foot, and up the leg, with variations in different cases. The paroxysm might, in some cases, be relieved by removing the shoe and rubbing or otherwise manipulating the parts. The pain was ascribed to the compression of the external plantar nerve, or its interosseous fibres, by the fourth and fifth metatarsal bones. He attributed the constant site of the affection (1) to the peculiar distribution of the external plantar nerve; (2) to the relative shortness of the fifth metatarsal bone, whereby its head and the base of the adjoining phalanx were brought in contact with the head and neck of the fifth metatarsal bone, when lateral compression was exerted; (3) to the mobility of the fifth metatarsal bone, enabling it to roll above and below the fourth. He ascribed the original cause of the abnormal mobility to injury, possibly rupture of the transverse ligament; and of the compression to tight shoes; in some cases no cause could be assigned.

The clinical picture, as portrayed by Morton, remains good for cases seen to-day.

The treatment advocated was removal of the head and neck of the fourth metatarsal bone, thereby relieving the branches of the external plantar nerve from pressure between those parts and the head of the fifth metatarsal and the base of the adjoining phalanx. The treatment was successful in all cases so dealt with.

In 1886, ten years later, Morton[2] recommended for mild cases the support of a flannel bandage round the metatarsus, and the use of broad, thick-soled boots.

In 1889, A. Poullosson,[3] of Lyons, described a case under the title of "Anterior Metatarsalgia," apparently identical to those described by Morton. He ascribed the symptoms to a laxity of the transverse metatarsal ligament, permitting a subluxation of the head of the fourth metatarsal bone whereby the nerves

distributed on either side of that bone were subjected to lateral compression. On this theory he successfully treated the case by a rubber pad placed beneath the depressed bone. This case was reviewed at some length in the *Lancet*.[4]

Roughton[5] reported a similar case, and asserted that the symptoms "were clearly due to sinking of the anterior transverse arch and to the resulting pressure of the heads of two or three middle metatarsal bones upon the sensitive structures of the sole of the foot."

In 1890, C. E. Woodruff[6] stated that anterior metatarsalgia was caused by giving way of the transverse ligament by long standing, injury, and the like; that the pain was caused by pressure on the digital nerves of the foot, and that it should be treated by pads beneath the anterior arch.

In 1891, Bradford,[7] of Boston, described sixteen cases, all of which appear to have been relieved or cured by external applications and by wide-soled boots Resection was not found necessary in a single case. He accepted Morton's theory that "the pain was entirely due to an irritated condition of the external plantar nerve caused by pressure."

In 1892, Guthrie[8] reported a case of anterior metatarsalgia, caused by depression of the head of the third metatarsal bone, which he treated with a supporting pad.

In 1893, J. S. K. Morton[9] reported six cases, all of which had been treated by resection of the head of the metatarsal bone; in none of these cases had he been able to demonstrate any laxity of the transverse ligament or other abnormal condition at the time of operation. He advocated thick-soled boots, sufficiently firm about the instep, together with the support of the flannel bandage in milder cases, and resection as the only cure for advanced cases.

In 1894, Gibney[10] reported six cases. He advocated that the longitudinal arch of the foot should be supported by a high-arched shoe, made on a Spanish last, in order to relieve the metatarsus of as much weight as possible. He further recommended that the *bases* of the metatarsal bones should be strapped, on the supposition that the heads of these bones would be thereby separated. He accepted Morton's original theory of causation.

In 1894, Goldthwait,[11] of Boston, described the relation between the depression of the transverse arch and the symptoms of anterior metatarsalgia. He concluded (1) that depression of the transverse arch was more common than that of the longitudinal arch; (2) that few persons were inconvenienced by it; (3) that in some, pain of a constant or paroxysmal character was present, usually referred to the centre of the arch, where a painful callus might be found; (4) that this location of pain was

much more common in his experience than at the point described by Morton: (5) that the causes of the depression were similar to those of the longitudinal arch, namely, excessive standing or walking, injury, weakness after long illness and probably improper shoes, particularly those too narrow; (6) that the depression of the transverse arch could be demonstrated by an impression of the sole, which showed an absence of the re-entering angle; (7) that the condition could be relieved by pads of leather or felt placed beneath the depressed bone or bones.

In 1897, Robert Jones,[12] of Liverpool, recognized depression of the anterior arch as a cause of the symptoms, but considered this was usually secondary to flat foot. He maintained that the characteristic pain was not caused by pinching of the nerves, because the metatarsal bones are separated when depressed, but was due to the direct downward pressure of the displaced bones upon the plantar nerve in the sole of the foot. His treatment was resection, and after-treatment, thick-soled boots, raised on the inner border as advocated by Thomas for the treatment of flat foot, with well-fitting insteps to support the longitudinal arch.

In 1897, T. G. Morton[13] showed by means of skiagrams that in two cases of metatarsalgia the first phalanx of the fifth toe was in close apposition to the head of the fourth metatarsal, and that there was a free space between the fifth and fourth metatarsals.

In 1898, Jones and Tubby[14] conjointly published thirty cases, and held that the cause of pain was pressure of the head of the fourth metatarsal bone upon the communicating branch between the external and internal divisions of the plantar nerve.

So divergent are the views of surgeons who have recorded their experience as to the etiology of this complaint, that it will be of benefit to briefly summarize them. Thus, Morton described this affection in feet otherwise normal, so also Bradford, whereas Jones found twelve out of fifteen cases affected with flat foot, and indeed considers this as the chief etiological feature. The site of the pain has most frequently been located in the fourth metatarso-phalangeal joint; yet Goldthwait states that the pain is much more frequent in other joints. Equally divergent are the views as to treatment. Thus, Morton and Jones have had to resort to resection in many cases, whereas Bradford, Gibney and Goldthwait state that the operation was never required.

In dealing with this subject, one is at once confronted with the difficulty of classifying cases. Various methods might be adopted, but all have their objections. Thus, the clinical manifestations vary in each individual case so markedly, from time to time and from surrounding circumstances, that any one case

might fairly be included in more than one clinical classification. Again, our knowledge of the pathology is so infinitesimal that it affords no help. Further, the results of treatment are so variable, not only in the hands of different surgeons, but also with the same surgeon in dealing with the same case, that any classification based upon relief by instrumental or operative methods proves equally unsatisfactory.

The character of the pain varies from a dull aching, more or less localized to a small area of the foot, to an agonizing cramp-like paroxysm extending up to the loin. The following two cases may be taken to illustrate this variation:

CASE I.—Miss B., aged 25; commenced in right foot seven years ago. Starts with a click; then experiences a sensation of hot and cold up and down body; then experiences acute pain in region of fourth metatarsal head which radiates down the toe on to the dorsum of the foot, and to two inches above the ankle. The attacks occur several times a day, and never a day passes without an attack. There is tenderness on pressure over the third and fourth metatarso-phalangeal joints. The longitudinal and transverse arches are well marked. There is no callosity. The head of the fourth metatarsal is not depressed. This patient experiences a dull pain, limited to the region of the fourth metatarsal head and corresponding toe on the left side; there is no radiation beyond this region, and the pain is not accompanied by the sensation of clicking. A tracing shows that the longitudinal arch is slightly lower in this foot than in the right, which is probably correctly explained by the increased work performed in the relief of the more affected foot.

CASE II.—Miss M. D., aged 30; commenced three years ago with swelling of foot and acute pain; has been a sufferer from weak ankles with pain in region of scaphoid and round ankles for upwards of ten years, and has worn instep supports for many years. Three years ago, a totally different pain started in the region of the third and fourth metatarso-phalangeal heads on the dorsum of the foot, radiating up the leg to the outer side of the knee, then to the inner side of the knee, then up the thigh to the hip and loin. She experiences no sense of slipping. There is tenderness over the third and fourth metatarsal heads, with the maximum tenderness over the fourth. There are no callosities. The longitudinal and transverse arches are markedly depressed, and the head of the fourth metatarsal bone can be felt somewhat prominently in the sole of the foot. There is no pain in the right foot though both arches are depressed.

The severity of the attack is largely determined by the proneness with which it can be cut short by appropriate manipulations. The majority of observers note that relief is obtained

only after removal of the shoe and various pullings of the toes; and this knack of relieving the pain influences the patient considerably in submitting to radical treatment, and likewise the surgeon in recommending it. The following two cases contrast remarkably in this respect:

Case III.—Mrs. M. W., aged 33; commenced ten years ago; is ascribed to bicycling in narrow-pointed shoes; attacks occur about once a month or more frequently. Pain, when severe and of long duration, is referred to the calf of the leg; can be relieved by removing the shoe and pulling the toe; has an accurate geography of her friends' houses, so that she can as soon as possible seek the shelter of their hospitality, and have her toe pulled if an attack commences when she is out. She is free from attacks for several weeks if in town, but they occur more frequently if she is walking on uneven ground in the country, and especially up and down hill. The fourth joint of the left foot only is affected. There is no dropping of the longitudinal or transverse arches. There is tenderness localized to the fourth metatarsal joint. It is interesting to note that some years ago she obtained relief for some months at the hands of another surgeon by submitting to some act of bloodless surgery under an anesthetic, assisted by subsequent massage, but the relief was of a temporary character only.

Case IV.—Mrs. U., aged 51; commenced ten years ago; never knows when the attack will come on; sometimes can play two rounds of golf without an attack, and at others, after walking a hundred yards an attack will commence. She removes her boot, but no manipulation or other method will cut short or relieve the attack. The pain starts at the left fourth metatarso-phalangeal joint, radiates down the toe and up the leg to the lower part of the popliteal space. There is tenderness on pressure over the fourth metatarsal head. There is no plantar corn nor dropping of the transverse or longitudinal arches. An attack can be easily started by slight pressure on the head of the fourth metatarsal bone, but by no other passive manipulation of the foot.

The frequency of the attacks and the character of the pain may be of such a character as to totally disable the patient from all enjoyment of life or the pursuit of her avocation. This is shown in the following two cases:

Case V.—Mrs. C., aged 35; commenced at the age of fifteen without apparent cause; was treated for many years without any relief by strapping, instep arches, special boots and rest. When she first came under my care, the pain of violent cramp-like character started in the fourth left metatarso-phalangeal joint, radiating to the toe and up to the hip. It was making her life a misery by its severity, its frequent occurrence, and

by an absence of amelioration by manipulation. She refused to try any further palliative measures, if indeed any remained to try, and I accordingly removed the head of the fourth metatarsal bone. Before operation, both arches were depressed, the head of the fourth metatarsal bone was prominent in the sole, and was tender upon pressure between the finger and thumb. A skiagram showed no deformity of the metatarsus or phalanges. The head removed showed a deficiency of cartilage near the junction of the cartilage and bone on the under surface. Fifteen months after operation, a tracing of the foot shows a fair longitudinal arch, with fair re-entering angle. The foot is functionally very good, but the recession of the fourth toe renders the foot somewhat unsightly, which scarcely deserves any worthy criticism in our present state of civilization. A steel sole plate, to support both arches, was worn for a few months after the operation. She has never felt any inconvenience or return of pain since the operation, although at present she informs me she is more than six months pregnant. To relieve the left foot before operation, she was in the habit of resting all her weight upon the right, which shows a greater depression of the longitudinal arch and complete obliteration of the re-entering angle, yet she shows no symptom of the disease in this foot.

Case VI.—Miss E. M., aged 31; commenced four years ago. Starts with pain in fourth right metatarso-phalangeal joint extending to toe and up the leg as far as the hip. Attacks more severe during last eighteen months, and are provoked by standing half an hour or walking a hundred yards. The longitudinal and transverse arches are flattened, as shown by tracing, and the fourth metatarsal head can be felt unduly prominent in the sole. There is a diffuse callosity under the metatarsal heads. There is marked tenderness on pressure upon the fourth head. No relief during an attack can be obtained by manipulation. As this patient's work involved long standing, as superintendent in a laundry of a sisterhood, and as the affection incapacitated her for her work, I removed the fourth metatarsal head by the dorsal route. The specimen shows a loss of cartilage on the palmar surface, close to its junction to the bone. She has experienced no pain since the operation, and there is no weakening of the foot. Eight months previously to seeing me pain commenced in the same site in the left foot, but was not so severe as in the right. I advised her to await the result of the operation on the right foot before submitting to operation upon the left. Encouraged by the result upon the right foot, and palliative measures having failed, she is now awaiting a bed in the hospital to have the left foot similarly dealt with.

The character and frequency of the attacks may be influenced

by climate and weather, and the following case illustrates that those conditions which render the joints of neurasthenics painful and tender, may also precipitate an attack of metatarsalgia.

Case VII.—Mrs. V., aged 30; commenced eight years ago, after bicycling in narrow fashionable shoes. Pain starts in right fourth metatarso-phalangeal joint and radiates when severe to the toe and up the leg as far as the knee. The frequency and severity of the attacks is much diminished when residing in a dry, bracing climate. Rough walking precipitates an attack, and strapping applied to the foot tends to relieve it. There is tenderness on pressure over the fourth metatarsal head on the right side; the longitudinal and transverse arches are well formed. The left foot is not affected, though the sole tracing is identical.

A summary of these cases shows the following points:

The pain involves the fourth metatarso-phalangeal joint in all cases, and the third in two cases; in this agreeing with most observers and differing from Goldthwait. Thus Whitman, in his last edition of his *Orthopedic Surgery*, records the location in seventy-eight cases: fourth in sixty: fourth and third in six; fourth, third and second in six; and in six only was the fourth joint free from pain.

All my cases occurred in women, in which sex it is acknowledged to be the more frequent. Thus in eighty-four cases quoted by Whitman, sixty-four were in women and twenty in men.

Six out of seven cases were seen in private practice, and the seventh was that of a woman, whose education was that of a private patient, and who only came under my care in the Royal Orthopedic Hospital by reason of her being a member of a religious sisterhood. This is also in agreement with the recorded cases. This point is still further emphasized by the fact that I have not been able to detect a single case in over 1,500 consecutive new cases attending the Welbeck Street Hospital for Nervous Diseases, whose cases I have investigated, and whose notes I have taken during the last nineteen months. More especially is this of interest as a nervous element has usually been attributed to enter largely into cases of metatarsalgia.

In none of these cases has there been a history of injury, nor of sudden onset, nor evidence of rupture of the transverse ligament. In two the condition was first noticed after bicycling in narrow shoes, and I think that the shoe is responsible, if not for the commencement of the affection, at any rate for its continuance in the early stages. For the attacks of pain never occur unless a boot or shoe is being worn, and are never relieved until they are removed. The modern fashionable high heel causes

more weight to be thrown upon the front of the foot and the narrow toes favor overriding of the fifth metatarsal upon the fourth, and limit the normal function of flexion of the phalanges in the act of walking forwards. In all my cases tenderness on pressure in the sole over the head of the fourth metatarsal bone was present. Ordinary manipulations of the foot were unable to elicit the typical paroxysms, but deep firm pressure at this spot invariably started an attack. A dropping of the transverse arch was observed in only three cases, and flat foot in three. That lowering of the longitudinal should play an important part in the etiology appears to me to be further negatived by an absence of all symptoms of metatarsalgia in many hundred cases of flat foot which I have treated. Further, I have seen many cases of complete obliteration of the transverse arch, either associated with flat foot or in cases of paralytic equinus, or of residual equinus in cases of congenital equinovarus, in which no symptoms of metatarsalgia were present.

The following case illustrates this point:

Miss G. E., aged 22, was suffering with hallux valgus with dorsal dislocation of the first phalanx of the second toe of the left foot. The head of the corresponding metatarsal bone was displaced downwards, and was felt prominently in the sole. It gave rise to pain on walking, as if a stone were constantly in her boot. The pain was strictly limited to this point and did not radiate, nor was it paroxysmal in type. I removed the head of this bone, which appeared normal, all cartilage being intact. Reviewing the case five months after the operation, I found that all discomfort had been removed, the deformity corrected and the foot not weakened.

In the cases treated by excision no changes have been observed in cartilage, bone or synovial membrane. Messrs. Tubby and Jones have found a neuritis, fibroma and an exostosis, the latter two pressing upon the communicating branch between the external and internal branches of the plantar nerve.

My own opportunities for observation have been limited. Two of the heads I have excised show a loss of cartilage on the under surfaces of the head, immediately adjacent to the junction of the bone and cartilage. The method of removal of the head by the dorsal route precludes the examination of the palmar surface at the time of the operation; for the interosseous and palmar ligaments have to be divided before the palmar surface of the head is exposed. It is possible that the cartilage at this point is detached from the head at the time these ligaments are severed. No remains of any cartilage was, however, seen attached to the ligaments at the time of operation. In conclusion, I would suggest that the following treatment should be adopted:

1. Remove immediate cause, namely, an ill-fitting shoe, and substitute a thick-soled shoe with high instep to support the longitudinal arch and relieve the front part of the foot of as much pressure as possible; with broad front to allow plenty of room for the toes to exert full flexion function.

2. Correct any apparent deformity of the arches by a steel sole plate, moulded before tempering upon a plaster cast of the foot, in which the depression of one or more joints has been corrected by filing.

3. Temporary relief may be afforded by pads of felt placed just behind the metatarsal heads.

4. Strapping is a simple experiment, and has been known to relieve.

5. In cases in which palliative measures have failed, proceed to resect without delay, with a fair chance of curing the disease and without fear of weakening the foot.

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MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

The Bible and the Physician.

At a recent even-song, for the special benefit of physicians, at an uptown church, the lesson was from Ecclesiasticus xxxviii. 1-15. As this book is reckoned among the apocrypha, and unknown, save to members of the Roman and Episcopal churches, and, we fear, unfamiliar even to many of these, we venture to transcribe the verses read:

1. Honour a physician with the honour due unto him for the uses which ye may have of him; for the Lord hath created him.

2. For of the most High cometh healing, and he shall receive honour of the King.

3. The skill of the physician shall lift up his head: and in the sight of great men he shall be in admiration.

4. The Lord hath created medicines out of the earth; and he that is wise will not abhor them.

5. Was not the water made sweet with wood, that the virtue thereof might be known?

6. And he hath given men skill, that he might be honoured in his marvellous works.

7. With such doth he heal (men), and taketh away their pains.

8. Of such doth the apothecary make a confection; and of his works there is no end; and from him is peace over all the earth.

9. My son, in thy sickness be not negligent: but pray unto the Lord, and he will make thee whole.

10. Leave off from sin, and order thine hands aright, and cleanse thy heart from all wickedness.

11. Give a sweet savor, and a memorial of fine flour; make a fat offering, as not being.

12. Then give place to the physician, for the Lord hath created him: let him not go from thee, for thou hast need of him.

13. There is a time when in their hands there is good success.

14. For they shall also pray unto the Lord, that he would prosper that which they give for ease and remedy to prolong life.

15. He that sinneth before his Maker, let him fall into the hand of the physician.—*New York Medical Journal.*

Gluttony as Cause of Symptomatic Epilepsy.

Spratling cites a case of epileptic convulsions due to dietetic errors, a fairly common condition, and one generally amenable to treatment. The patients are usually middle-aged men, leading inactive lives and eating and drinking to excess. The primary cause of the convulsive attacks in these cases seems to lie, first, in a weak stomach and, second, in some obscure disorder of metabolism. The type of convulsion is usually of the grand mal variety. The treatment consists of the elimination of waste and toxic products and the prevention of the recurrence of such products. Put the patient on a low diet, one that is easily digested, insist on absolute regularity in taking food, and going to bed on an empty stomach. Cut off all meat for supper and breakfast, and teach the patient to have a wholesome respect for cooked fruits, bread and butter, toast, milk, chocolate and cocoa, eggs, and other such things for supper. If there is a tendency to constipation, correct it by daily doses of the fluid extract of cascara, given some time before breakfast. Stop all use of alcohol, and if the patient is irritable or nervous, and if his attacks show a tendeny to recur under the low dietetic régime, put him on a nerve sedative made up so that each dose represents from 10 to 15 grains of an equivalent of bromide of potassium. Let the patient take as much outdoor life as possible. Hydrotherapy is of great value.—*Med. Record, and Jour. A. M. A.*

Treatment of Sciatica.

Lange describes a modification of the injection treatment of sciatica which has given surprisingly fine results in his hands. To date he has applied it in only 11 cases, but the results have been so favorable that he does not wait for further confirmation. In one case a patient during seven weeks of frantic pain had been able to sleep only under the influence of morphin. Since a single injection by the technic described he has had no trace of the sciatica. One patient was a working man who for four months had suffered from sciatica and atrophy of the leg, and was only able to limp with a cane. In less than forty-eight hours he was entirely relieved and walked normally. The results were similarly perfect in 6 cases. Four other patients were essentially improved, and there was only one entire failure in the list. The latter case was distinguished by the sudden onset and severity of the attacks of sciatic pain. The technic consists in the injection of from 70 to 100 c.c. ($2\frac{1}{3}$ to $3\frac{1}{3}$ fl. oz) of a solution of 1 per 1,000 beta eucain in 8 per 1,000 salt solution. The needle

is inserted through the muscle down to the sciatic nerve at its point of emergence from the sacro-sciatic foramen. There is no pain as the needle passes through the muscle, but the patient jumps the moment the nerve is touched. The pain is instantaneously deadened by the eucain injected. The patient is told not to lie on that side for a few hours. Except for a slightly painful sense of pressure, the sciatic affection is banished at one stroke in some cases, but a second injection may be required in others. Notwithstanding the small amount of eucain used—not more than from .1 to .15 gm.—sometimes slight, transient signs of intoxication were manifested. There was slight nausea and in one case transient loss of appetite for nearly three days. Lange also noticed that the taste was dulled for from one to three hours in some instances. No alarming symptoms of any kind were apparent in any case. In a few cases he observed distinct rise of temperature, never above 38.9 C., with a chill in one neurasthenic subject. He ascribes this temperature to an aseptic reaction to the mechanical lesion. He advocates trial of this method after failure of other measures. Its simplicity and harmlessness commend it for general adoption. The eucain is probably soon swept away and the permanent benefit derived must be due to the changes in the condition of the parts induced by the injected fluid, similar to the benefit derived from stretching the nerve.—*Munchen. med. Woch., and Jour. A. M. A.*

Diazo Reaction in Tuberculosis.

Widstrand has made more than 2,000 examinations of the urine for the diazo test in 204 consumptives. Forty died in the hospital, and in 37 of these the diazo reaction was constant. In the 3 others the clinical diagnosis of pulmonary tuberculosis was not confirmed by the autopsy. In the mild or chronically latent cases the reaction was almost invariably negative. It is thus valuable for the prognosis and sometimes also for the differentiation. It is especially important when circumstances, such as frequent hemorrhages, forbid physical investigation. The positive reaction may turn the scale in favor of the assumption that the case is too far advanced for hope of a cure.

Holmgren gives excerpts from the hospital records of 158 cases of pulmonary tuberculosis, the results confirming the preceding conclusions. He adds that the stronger the reaction the nearer impending death, the interval not longer than from six to eight weeks. When the diazo is distinct but not strong, the maximal life expectancy can be placed, with great probability, at eighteen months, the average at six months. Among the patients in the third and in the advanced second stage, who presented a dubious or negative reaction, only 16 and 9 per cent., respectively, died within this average limit. A single

positive reaction is sufficient for these deductions, and, as the test is so simple and easy, it should be currently adopted as a practical and valuable guide to prognosis. It enables those with a specially unfavorable outlook to be distinguished among the advanced cases and their life expectancy to be stated with greater exactness than by the physical findings alone.—*Jour. A.M.A.*

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Value of Medicated Clay Poultices.

A. H. Roth, Ann Arbor, Mich. (*Jour. A. M. A.*, April 15), has investigated the claims and the action of a representative medicated clay poultice. These preparations, he states, are made up of a base of silicate of ammonia and magnesia, to which various aromatics and antiseptics are added, together with glycerin to make a pasty mass. It is claimed that their external application acts as a reflex vasomotor stimulant and promotes dialysis through the skin. As the preparations are non-irritating, the reflex action must be exercised through the heat produced by the warm application, and Roth finds from careful experiments that they are inferior in this regard to ordinary warm flaxseed poultices. Experiments on the living subject showed that the dialyzing power was no more effective in exciting perspiration than heated gauze pads. There was no evidence of any osmosis or endosmosis, as was shown by experiments made with fresh human skin as a membrane through which no fluid passed until it had become waterlogged, a condition which it is doubtful ever occurs in the living subject. Roth speaks especially against the practice of using these mixtures in open or septic wounds. Their value in acute rheumatism and pneumonia is not greater than that of older and simpler methods and in pneumonia, especially in children, their weight embarrasses respiration, and the presence of the clay mixture interferes with the necessary physical examinations. Their use is a revival of the old poultice method, for which better substitutes have been found.

NOTE.—The above excerpt, taken from the *Journal of the American Medical Association*, in our opinion deals very roughly with the medicated clays. We hold no brief for Antiphlogistine, but it seems to us as if the whole article was written to, in some way, lessen one's spleen against some one else, and probably that was Antiphlogistine. We have used the medicated

clays a great deal, and always with benefit, but we have never used them in open or septic wounds. We have found great advantage from the use of them in acute and muscular rheumatism, chronic joint inflammation and other conditions that are not necessary to enumerate here. The last sentence we do not agree with at all, because the use of these medicated clays is not a revival of the old poultice method that soften or scalded the cuticle, causing the formation of small and often large blisters, and rendering the surface more susceptible to septic absorption.

We append this note of our own volition, because we believe it due to the remedy that the article is supposed to condemn. If the article is as valuable as the space devoted to it would signify, the writer should have named the preparation rather than refer to it as "a representative medicated clay poultice."

E. E. K.

The Radical Cure of Senile Hypertrophy of the Prostate.

Dr. Orville Horwitz, in a paper read before the Northwestern Branch of the Philadelphia County Medical Society, on "The Radical Cure of Senile Hypertrophy of the Prostate," summarizes the matter as follows:

1. A routine method is not applicable to the treatment of prostatic hypertrophy; every case is a law unto itself and the treatment will depend on the various conditions presented in each individual case.

2. The dangers attendant on the daily catheterism are greater than those of a radical operation performed at the onset of the symptoms caused by the obstruction.

3. The proper time to perform a radical operation is reached as soon as it becomes necessary for a patient to resort to daily catheterism.

4. The gratifying results obtained by a number of the operations in many cases demonstrate that the Bottini operation is one of great surgical value. It is applicable to a large percentage of cases; which, if properly selected, has proved to be the safest and best method of relieving an obstruction caused by prostatic hypertrophy. In those cases in which a stone in the bladder is associated with a prostatic enlargement, litholapaxy may be performed in conjunction with a galvanocautery prostatectomy.

5. A complete prostatectomy is justifiable if performed early before the individual is broken down in health and secondary complications have supervened. In early operation the results are most satisfactory, recovery rapid, the mortality varying between five per cent. and seven per cent.

6. In a complete prostatectomy in feeble, elderly patients, with

long-standing obstruction and secondary complication, the prognosis is grave and the mortality ranges between fifteen per cent. and eighteen per cent. If the bladder in these cases happens to be hopelessly disabled, the results obtained by the operation are negative. Cases of this description are only suitable for suprapubic drainage.

7. In ninety per cent. of all cases the gland can be readily removed by means of a median, perineal incision. The perineal operation recommended by Bryson is considered the operation of choice.

8. Complete suprapubic prostatectomy is shown to be more dangerous than the perineal operation for obvious reasons. A suprapubic prostatectomy is safer if combined with perineal drainage.

9. Partial suprapubic prostatectomy is indicated in such cases as where a valve-like lobe exists which interferes with urination, or where there is a partial hypertrophy of one of the lobes.

10. A perineal prostatectomy is best suited for those cases where the enlargement of the lateral lobes has a tendency to progress towards the rectum, to obstruct the urethra, or project backwards into the bladder.

11. A prostatectomy is always attended with more danger than the Bottini operation, and the convalescence is more prolonged. In suitable cases the latter operation is therefore the one of choice.

Editorials.

OBTAINED BY SUPERIOR ABILITY.

"It was a great day in the Fox's cave. The eldest cub had, the night before, brought home his first goose, and they were sitting down to it as the Cat came by.

* * * * * * * *

"Fox," she said, when it was over and the cubs were gone to play, "you are very clever. The other creatures are all stupid." The Fox bowed. "Your family were always clever," she continued. "I have heard about them in the books they use in our schoolroom. It is many years since your ancestor stole the crow's dinner."

"Don't say 'stole,' Cat, it is not pretty. Obtained by superior ability."

—From *The Cat's Pilgrimage.* JAMES ANTHONY FROUDE.

Oppressed with the feeling that lack of time for reading and study was going to ruin our practice and render us useless to our patients, we eagerly snatched the first good book that came into the editorial sanctum and retired into a quiet corner with it, as anxious for non-intervention as any dog with a bone ever was. The book was well printed, well bound, and well praised by the multitude, and we, the editor's most junior assistant, opened it with enthusiasm. It was the far-famed "American Year-Book of Medicine and Surgery," edited by Dr. Gould, with the assistance of twelve other great and good Americans, and gotten up by W. B. Saunders & Co. in their best style. It opened of its own accord at page 433, "Obstetric Operations." "Yes," said the junior, and proceeded with reverence to read within the sacred enclosure of square brackets, the original comments of Dr. Gould and his twelve authorities on this important subject. A good, hard, honest evening's reading, like the days when the junior was only a fourth-year student, is an enticing prospect.

But not five lines had been read when a sickening doubt of our own mental state began to trouble our mind. Where had we read this before? In vain we stoutly said, "Nonsense!—Nowhere, of course," and tried again. It would not down. The harder we tried to read, the more our senses seemed to reel, the more uncertain was our cerebration, the more one part of

our brain shouted to another, "I *have* read that somewhere before." The conflict went on for hours, but suffice it to say that the junior emerged from that conflict at last with the new and shining green American Year-Book in one hand, open at page 433, and in the other THE CANADIAN PRACTITIONER for April, 1904, open at page 196. Word for word, line for line, letter for letter, comma for comma, there it was! "Our Views" begins the PRACTITIONER'S editorial. "Our Views" begins the page of editorial comments in the Year-Book. True, paragraph four, referring to our esteemed friend, Dr. Stevenson, of Bradford, Ont. (who will please accept our condolences on so narrowly missing fame), is omitted, but all the rest is there—not one jot or tittle wanting.

Truly, this is an example of professional and editorial etiquette somewhat rare. Dr. Gould will be sorry. He does not do things this way. He cannot oversee every detail. But what of the responsible sub-editor of the section?

The new and practical and up-to-date definition of stealing, viz., "obtaining by superior ability," does not appear in any medical dictionary that we have in this office.

This display of "superior ability" is all the more to be regretted because the stolen page is also one of the many good pages in the new work on Obstetrics (now in press), by our senior editor, Dr. Adam H. Wright, from whose pen, of course, the PRACTITIONER'S editorial came.

> "In vain we call old notions fudge,
> And bend our conscience to our dealing;
> The Ten Commandments will not budge,
> And stealing still continues stealing."
>
> —*James Russell Lowell.*

THE TELEPHONE.

Few people suffer more from the telephone, its vagaries, its injustice, and its grasping monopoly than doctors do. All success to Sir William Mulock in attempting to mend matters.

We do not want two or three rival telephone companies in Ontario, for we would rather bear the evils that we have than fly to others that we know not of, and anyone who has lived

in American cities and been compelled to have two telephones in his office—one belonging to one company and the other to its rival—will bear us out in this statement. In Baltimore, for example, the state of things is so bad that most of the prominent physicians will not have telephones at all, preferring to retain their sanity. If the Bell Telephone Company is wise it will meet the public half way. There are three chief complaints at present. 1st. The service costs the subscriber too much. 2nd. The telephone is not answered as well as it should be from the central office. 3rd. The company takes every opportunity to compel additional outlay on the part of the subscribers.

1st. The cost of the service, $40 per annum to physicians, is excessive. It simply means that the company, as a monopoly, is forcing us to pay, not a fair sum, but a rather extortionate one.

2nd. The answering of telephone calls. Why is it that the doctor on ringing up his own office is told "line busy" when the line is *not* busy? This happens to us all. It happened to the writer the other day in a drug store, and the druggist, an experienced man, said that he understood the company employed a "cheap line of operators." A telephone employee, a patient of the writer, says that a good many girls of fourteen have replaced older and more experienced operators. In justice we must add that some of the central operators are excellent, and that the man who comes to see what is wrong when "No. 1000" has been rung up, is almost always competent and civil. But this does not answer the average telephone call!

3rd. A great many of the telephone instruments in Ontario are out of date: often the very same that were put in when the telephone was first invented. If the subscriber complains of a poor and worn-out instrument he has no redress, but is compelled to pay *$5.00 extra a year* for a proper instrument. Total, $45 per year. Now, is this fair? What do we pay the $40 for if not for a telephone we can use!

Again, if we need another instrument in the house connected with the first, one upstairs, say, and one down stairs, the telephone monopoly makes us pay $18 or $20 per year additional for the rent of the second instrument. Why? Not

because it is worth it, but because the company has us in the monopoly prison, and we cannot by any means get out thence until we have paid the uttermost farthing.

Go on, Sir William Mulock; go on and prosper.

ORIGIN OF SYPHILIS.

Although the introduction of syphilis among Europeans is of comparatively recent date, its history is shrouded so mysteriously that we can only guess at its origin. Even the etymology of the word is obscure. Some derive it from the Greek "syn" *with*, and "philos" *love*, but there is much doubt about this. The word, as far as can now be learned, was first used in 1530 as the title of a poem by Hieronymus Fracastorius, an Italian physician, and a man of such great culture and elegance of Latin style that he almost merited his epithet of "The Divine."

There is a fable that the disease dated from the siege of Naples (1494), when the besieged Spanish garrison, comprising some of the crew of Columbus, infected the French army, who in turn rapidly scattered it throughout Europe; hence the common name, *morbus gallicus*. But the French denied this and called the disease, *morbus neapolitanus*, after the place of its birth. Probably both names show only the racial antipathies of mud-throwing patriots.

It is interesting to note, in view of some more modern ideas of syphilis, that Paracelsus attributed the origin to the intercourse of a leper with a prostitute, and that Fallopius informed the professional world that the original epidemic of the "French disease" came from wine, which the Spaniards, in the siege of Naples, had poisoned with the blood of a leprous soldier. When the besieging and victorious French took possession of the city, they drank freely of the luscious wine, and soon after developed typical symptoms of venereal disease. Even our own Chancellor, Lord Bacon, averred that in this famous siege the French ate human flesh, which had been prepared from men killed in Barbary, where the people consume large quantities of fish. And so the theories of the close relationship between syphilis, leprosy and fish are not at all modern.

There is no doubt that venereal diseases contracted from individuals of a remoter race, are more markedly severe and much more destructive in their type than those contracted from persons of the same nationality. The chancres of the wharf districts of large cities are always bad, because the females of those localities enjoy the continuous patronage of the foreign sailors and refugees – the dregs of other countries. And so there may be a grain of truth in the fable to which we referred. It may be that syphilis, in a very mild form, was comparatively common all over Europe, but that the fresh inoculations brought back from America, and so freely scattered about during the siege of Naples, gave a new vigor to the disease, which attracted the attention of physicians, and caused them to mistake it for a new infection.

THE DOCTOR AND COMMERCIAL INVESTMENTS.

A circular has been sent out recently to a large number of physicians offering preferred stock in a sanitarium company, in which the promotors say: "We take pleasure in announcing that our receipts have increased three times in six years, and that the daily average for 1904 was 75 people. Owing to the increased business and from the fact that we are paying good dividends, the company have decided to submit to the leading physicians the enclosed offer of preference stock."

In the circular it says: "The directors have decided to issue 150 shares of the company as preference stock, at a par value of $100 per share, with a dividend of 7 per cent. per annum, payable half-yearly, such dividends to be cumulative. The company reserves the right to redeem the stock at the end of ten years at $110 per share and accrued dividends."

This looks like a safe investment; we rather believe it to be so; the sanitarium company is undoubtedly in a flourishing condition. That they require money to enlarge their premises and extend their business is by no means peculiar, but it does seem strange that the company should expect physicians, or anybody else, with an eye to business, to subscribe their money on a 7 per cent. accumulative basis, and just when the concern is, or

should be, on a sound paying basis, to be forced to sell the stock at a premium of 10 per cent. There is no doubt about it that the promotors are selling the stock with a large-sized string on it, and as such we do not see why physicians should subscribe. If they want this money, and are willing to take subscriptions at the present time at par value, surely the increased value of the stock should accrue to the man who invested his money while the venture is on an ordinary paying basis. This idea of subscribing for stock to be redeemed at a premium of 10 per cent. in ten years, is not a fair basis to the subscriber. If the company fails and does not meet its expectations, the stock is worth nothing, except whatever the assets may bring, and the bonds will likely take the lion's share of these. If the venture is successful, then the subscriber must sell it at a paltry 10 per cent. increase, or 1 per cent. per year. It is true he has had good interest on his money, but he might have been able to have made a more profitable investment. It is stated in the application for stock, "I further agree to and with the company, that the said stock so subscribed for and allotted to me by the company may, at the option of the company, be redeemed at $110 per share on the 1st January, 1916."

This places the increased value of the stock, as we say, at 1 per cent. per year, but if the proposition goes on as it has in the past six years, and the sanitarium company should, as they state in the first part of their circular, increase "three times in six years," the value of this stock will be increased at least 50 per cent., consequently there should be no agreement to sell at $110, or any fixed sum. If the venture does not pay, or if the business requires constant reinvestment of capital, the interest may not be paid year by year, but will accumulate; consequently the interest is still a first charge. At the same time it may not be payable to the stockholder until probably the ten years have expired. Doctors, as a rule, are very poor business men, and a proposition such as this, which holds for them an accumulating 7 per cent. investment, with a 1 per cent. premium on stock, making it appear to be an 8 per cent. investment, has a glamor about it that is somewhat attractive to the untrained business eye. We cannot see, however, how this is such a grand investment with the re-purchase string attached to it.

CANADIAN MEDICAL DINNER IN LONDON, ENGLAND.

There is quite a colony of Canadian physicians in London, England, and in that colony there is a good-sized party of the ex-members of the House Staff of the Toronto General Hospital. Dr. Donald Armour, who has been living in England for some years, entertained the latter at dinner, April 4th. There were present in addition to the host, Doctors J. M. Cochrane, Jas. M. MacCallum, W. J. Malloch, Geo. W. Badgerow, S. H. Weston, Colin Campbell, E. D. Carder, A. C. Hendrick, H. Lowry, W. W. Jones, J. R. McCollum, G. W. Ross, A. T. Stanton, G. A. Schmidt, P. W. Saunders, T. P. Weir, Arthur B. Wright, R. D. Sproat, A. D. McEachran and Stewart.

We are told by some of the "Boys" who were present that they spent a very enjoyable evening. Among the toasts proposed by the host, who welcomed his Canadian confreres in a very happy speech, were "The King," "Canada and the Empire," and the "Toronto General Hospital, coupled with the name of its Superintendent, Dr. Chas. O'Reilly."

We are informed by the Toronto *Globe* that this toast was responded to by every man present, and the result was a tremendous flow of eloquence that lasted so long that there was no time for any other toasts. The many references to their old chief, Dr. O'Reilly, were of the most pleasant sort.

ONTARIO MEDICAL ASSOCIATION.

The twenty-fifth annual meeting of the Ontario Medical Association will be held June 6, 7, 8, in the west lecture hall of the New Medical Building of the Faculty of Medicine of the Toronto University, under the presidency of Dr. Burt, of Paris.

For many years the meetings occupied two days only. In the year 1903 there was a three days' meeting for the first time, and there was also a similar length of time occupied in 1904. This was found so satisfactory in both 1903 and 1904, that the Committee on Papers and Business for this year have decided to follow the examples of the officers of the last two

years; and it now seems likely that the three days' meeting has become practically a permanency.

Among the invited guests who have promised to attend are: Doctors A. J. Ochsner and W. B. Pritchard. Dr. Ochsner is surgeon to St. Augustine Hospital, Chicago, and is recognized as one of the best clinical teachers of Surgery in the United States. Dr. Pritchard is a professor in the Post-Graduate College of New York City, and is well known as an able neurologist and excellent clinical teacher. These two men are fairly well known to the profession of Ontario, and are likely to receive a warm welcome at the meeting.

We are informed by the Secretary that the programme is nearly completed, but we are also asked to announce, that all members who intend to present papers should inform the Secretary, Dr. Chas. P. Lusk, 99 Bloor Street West, Toronto, as soon as possible.

We have referred in previous issues to the indefatigable efforts of our President, Dr. Burt, to make this meeting a success; and, as intimated before, we know of no president who has worked more faithfully in the interests of the Association. We sincerely hope that he will get what he richly deserves, that is, the cordial support of all members of the profession in Ontario in his efforts to make the coming meeting a success.

Canadian Medical Association.

The thirty-eighth annual meeting of the Canadian Medical Association will be held at Halifax, N.S., August 22nd to 25th, 1905. The General Secretary, Dr. George Elliott, 203 Beverley Street, Toronto, in his official notice respecting the meeting, calls attention to the following extracts from the constitution:

> All papers (and abstracts thereof) should be in the hands of the Committee on Papers and Business at least three weeks before the date of meeting.
>
> A copy of every address, discourse, or paper read before the Association shall be handed at once to the General Secretary, and shall become the property of the Association, and shall be held with the other documents.
>
> Members desiring their papers to appear in any particular medical journal shall present a duplicate copy, with the name of the journal marked thereon.

We are glad to know that the physicians of the Canadian

Medical Association are taking a very active interest in the welfare of that admirable organization which is known as the Canadian Medical Protective Association, and are very anxious that all their members should join the latter body. In the same connection we are glad to know that many local societies are taking an active interest in this Association, and are making special efforts to secure in the near future as many new members as possible.

TORONTO GENERAL HOSPITAL.

Statistics for March, 1905.

Patients in Hospital, February 28th	305
Patients admitted in March	283
Births in March	20
Total in March	608
Deaths in March	17
Discharged in March (including 130 who had operations performed during their stay in Hospital.)	302
Number in Hospital, March 31st (not including infants)	269

Deaths in March.

Abscess, alveolar, 1; Bright's disease, 1; cancer, arm, 1; cancer, rectum, 1; erysipelas, 1; gunshot wound, 1; fracture of skull, 1; fracture of ribs, 1; heart disease, 2; miscarriage, 1; pneumonia, 1; empyema, 1; uremia, 1; peritonitis, 1; stone in kidney, 1; nephritis, acute, 1.

During March 836 extern patients received advice and medicine at General, and 198 accident cases received first aid at Emergency Branch, 105 Bay Street.

Personals.

Dr. R. W. Powell, of Ottawa, visited Toronto, April 12th.

Dr. Edmund E. King expects to sail for England, May 5th.

Dr. Joseph Graham returned from England to Toronto, April 3rd.

Dr. H. F. MacKendrick, of Galt, was in town during Horse Show week.

Dr. W. P. Caven, of Toronto, went to St. Mary's, Ont., April 21st, for a week's holiday.

Dr. Andrew D. Farrell (Trin. '00) has been appointed Associate Coroner for Hastings County.

Dr. W. H. B. Aikins left Vienna for Paris, April 17th, and expected to reach Toronto about May 6th.

Dr. Geo. McDonagh, after his Mediterranean trip, returned to Toronto, April 3rd, and commenced practice, April 5th.

Dr. James F. W. Ross left Florida, April 1st, returning to Toronto, April 6th, and resuming his practice on April 7th.

Dr. W. H. B. Aikins when last heard from was about to leave Vienna, and expected to reach Toronto about May 5th.

Dr. Welford, of Woodstock, was slightly injured by the explosion of an acetylene generator in his house, March 17th, but has quite recovered.

Drs. Hendrick, Carder and Malloch reached London, England, March 20th, and will be engaged at post-graduate work for some time in that city.

Dr. Wm. S. Thayer who has been chief assistant to Dr. Osler for some years in Clinical Medicine, has been appointed Professor of Clinical Medicine in the same University.

Dr. Frank S. Nicholson (Trin. '94), Surgeon-Major Nebraska National Guard, visited his friends in Toronto early in April, after completing a post-graduate course in the Army Medical School, Washington.

The medical profession of the United States and Canada gave a banquet in honor of Dr. Osler at the Waldorf-Astoria, New York, on May 2nd. Dr. Osler expects to leave for Oxford, May 17th.

Dr. J. P. Russell, of Simcoe Street, has sold his practice and residence, and after a brief holiday in Strathroy, will locate in the far West. Dr. Russell has received an appointment on the Grand Trunk Pacific Railroad.

Dr. Emory Lanphear, who for twenty-five years has conducted the editorial work of, and latterly owned, the *American Surgery and Gynecology*, has sold the journal to Dr. J. MacDonald, jr.

Dr. Lewellys F. Barker who has been head of the Department of Anatomy for nearly five years at Chicago University, has been appointed Professor of Medicine in Johns Hopkins University in the place of Dr. Osler.

Dr. George A. Peters, of Toronto, is slowly recovering from his attack of la grippe, but does not expect to do any active surgical work for three or four months. He and his family are at present living on a farm, near London, Ont.

Dr. Osler's medical friends in Toronto desired to entertain him at a dinner before he left for Oxford. Dr. Osler, however, had so many engagements that it was found impossible to fix a date in all respects satisfactory, and the Committee in charge desired to postpone the event (for, it is hoped, a not very long period).

Dr. John L Bray, of Chatham, received the honorary degree of LL.D. from Queen's University, Kingston, at the recent Convocation. Dr. Bray is one of the most progressive physicians in Canada, and has taken an active interest in higher medical education; is a Past-President of the Canadian Medical Association, and also a Past-President of the Ontario Medical Council, of which he has been a member for twenty-five years. Congratulations!

Dr. J. MacDonald, jr, who for the past fourteen years has been manager and managing editor of the *International Journal of Surgery*, has severed his connection with that journal, and has purchased *American Surgery and Gynecology*, published in St. Louis. He has associated with him as contributory editors, Robt. T. Morris, Professor of Surgery, N. Y. Post-Graduate School; Howard Lilienthal, Visiting Surgeon Mount Sinai Hospital, N.Y.; J. P. Tuttle, Professor Rectal Diseases, N. Y. Polyclinic; Jas. T. McKernam, Professor Nose and Throat, N. Y. Post-Graduate School; Samuel G. Gant, Professor Rectal Diseases, N. Y. Post-Graduate School; Augustin H. Goelet, Professor Gynecology, N. Y. Clinical School of Medicine; C. Wendell Phillips, Professor Diseases of the Ear, N. Y. Post-Graduate School; Ferdinand C. Valentine, New York, and has changed the name to *The American Journal of Surgery*. We wish Dr. MacDonald all success, and we have no doubt but that in his new sphere he will bring *The American Journal of Surgery* to a very high standard.

Obituary.

J. A. KELLY, M. D.

Dr. Kelly, of Durham, Ont., died in South Omaha, March 9th. He graduated M.D. from McGill University in 1887.

JOHN A. NELLES, M.D.

Dr. Nelles was one of the oldest practitioners of Ontario. He died at his home in London, March 25th, aged 78. Apoplexy is said to have been the cause of death. He graduated M.D. from McGill University in 1850.

WILLIAM HENRY JOHNSON, M.D.

Dr. W. H. Johnson, a practitioner in Fergus for many years, died at his old home in Eramosa Township, April 18th, aged 60. He graduated M.D. from the University of Victoria College in 1873. Although engaged in a laborious practice he was an active public citizen, being Surgeon-Major of the 30th Battalion, President of the Horticultural Society, and Secretary of the Public Library Board.

JOHN HERALD, M.A., M.D.

Dr. Herald, of Kingston, Ont., died April 12th, in the Toronto General Hospital. Abdominal section had been performed on the previous day, and a large number of gall-stones were removed. He never rallied after the operation, and died in about twenty-four hours from pulmonary thrombosis.

Dr. Herald was educated at Queen's University, Kingston, and became B.A. in 1876, M.A. in 1880 and M.D. in 1884, and was subsequently appointed a member of the staff of that institution. He was also for some years a member of the governing body of the University, and was for several years Professor of Materia Medica and Therapeutics in the Medical Faculty. He took an active part in public matters, and was at one time Mayor of the city of Kingston. He always took a very great interest in higher medical education in Canada. His death is a severe loss for Queen's University, the city of Kingston, and also the Dominion of Canada.

Book Reviews.

Chemical and Microscopical Diagnosis. By Francis Carter Wood, M.D., Adjunct Professor of Clinical Pathology, College of Physicians and Surgeons, Columbia University, New York; Pathologist to St Luke's Hospital, New York. With one hundred and eighty-eight illustrations in the text and nine colored plates. Cloth, $5.00; Half Leather, $5.50. New York and London: D. Appleton & Company. Toronto: Morang & Company.

The up-to-date practitioner of the present day is distinguished from his predecessor of twenty years ago by the fact that he applies the results of modern researches on the blood, sputum, urine, and other secretions and excretions of the body to the solution of his problems of diagnosis. Just inasmuch as he uses these methods intelligently and carefully is he superior to other practitioners who employ only the older means of physical diagnosis.

It has been shown that a considerable number of cases which were supposed to have typhoid fever, with rapid and progressive anemia, had an entirely different disease, acute lymphatic leukemia, a diagnosis of which can be made only by an examination of the blood. Again, an operation is occasionally performed for the removal of tumors of the abdominal cavity, when, if the blood had been examined, the patient would not have been subjected to the shock and danger of an operation. Such patients may be the subjects of myelogenous leukemia, and an operation under these conditions is unjustifiable. Again, the question of testing for albumin in the urine, is of the greatest importance in connection with the question of life insurance, and also with the problem of early diagnosis of chronic nephritis at a stage at which the disease can be improved by treatment.

So, too, the identification of the different sugars in the urine, upon which special stress has been laid, enables the practitioner to distinguish between true diabetes and the alimentary melliturias, the latter being of importance from a dietary point of view, but not of bad prognostic import.

The study of sputum may enable the practitioner who employs suitable staining methods to diagnose tuberculosis before changes in the lungs sufficient to give rise to physical signs make their appearance, and thus the patient gains six months or a year at a period when climatic treatment is most useful.

The diagnosis of carcinoma of the stomach is often impossible by the ordinary means employed in physical diagnosis. Analysis of the gastric juice, however, frequently enables the surgeon to obtain such strong diagnostic hints of the condition involving the stomach that an operation is warranted. Such

operations are the only successful ones, for when a tumor can be palpated the patient is beyond the reach of a radical cure.

The new text-book by Prof. Francis Carter Wood, of Columbia University, has been prepared with special attention to the needs of the practical clinician. It is the result of a good many years of teaching and laboratory work in Columbia and in one of the largest hospitals in New York City.

The section on the examination of the blood, which is one of the most difficult for the practitioner to master, without direct laboratory teaching, has been made especially full, and, owing to the liberality of the publishers, a series of light-colored plates has been introduced into the text, the drawings being made by the author directly from the specimens as stained for routine examination. The practitioner, therefore, has an atlas of the diseases of the blood, such as is given in no other published work. Besides these, the text has been embellished with numerous photographs of blood, taken from various diseases in which the morphological findings are most important. The practitioner sees before him the exact picture which he would see through the microscope, the plates being entirely untouched and representing naturally the exact conditions which they are intended to illustrate. Great stress is laid upon the practical details of blood counting, estimation of hemoglobin and also on the testing of blood stains for the various blood pigments, while throughout the book the various tests for blood in the different excretions have been carefully amplified, with special directions for stomach contents and feces. Wood's Chemical and Microscopical Diagnosis devotes a very considerable space to the discussion of the blood findings in disease. The different anemias are classified and the morphological changes which are found are discussed in detail. Special stress is laid upon the changes in the blood in surgical conditions, in anemia in children, and in the obscure types of blood diseases intermediate between anemia and leukemia.

The section on Parasites is very fully illustrated and is thoroughly up to date, many illustrations being from photographs and drawings of specimens in the author's collection.

Under Sputum we may call attention to the completeness with which the methods of demonstration of the tubercle bacillus under various conditions are emphasized and described.

The chapter on Urine is one of the largest in the book, and contains much that is new and not to be found in other text-books of clinical diagnosis. The needs of the practitioner are consulted. An especial feature is the introduction of a number of pages giving the reaction of drugs when they appear in the urine. The reactions of iodine in the urine are also given in full and likewise those for mercury, the detection of the latter

being especially important in connection with the treatment of syphilis.

Casts and crystals in the urine are illustrated by many photographs, as are the various other deposits found in that fluid.

A section is devoted to the results of recent methods of determining the functional efficiency of the kidneys from the point of view of surgical diagnosis. The only text-book which treats this subject fully is one translated from the German and now some four years old. The advances in these four years are fully presented by the writer.

Recent progress in infant feeding was largely developed, by the study and analysis of the relation of human and cow milk. The methods of analysis of both fluids are fully given.

An appendix has been added containing full directions for the making of staining fluids, the care and purchase of apparatus, the necessary reagents, the preparation of normal solutions, the clearing of slides and cover glasses and the removing of dyes from the hands, thus completing a very practical book.

Eye, Ear, Nose, and Throat Nursing. By A. Edward Davis, A.M., M.D., Professor of Diseases of the Eye in the New York Post-Graduate Medical School and Hospital, and Beaman Douglass, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital. With 32 illustrations. Pages xvi-318. Size, 5½ x 7¾ inches. Extra cloth. Price, $1.25 net. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

This is a book which should be in the hands of all who have, or may have, to nurse a case of eye, ear, nose or throat trouble. It should be carefully read and studied from cover to cover. Not only would nurses find it invaluable, but students and general practitioners as well. For, away from the large centres, the family physician often has not only to operate, but to give full directions to the nurse as well. The book covers the ground fully, its directions are clear and practical, and it gives a mass of information difficult to obtain in any other way.

Malformations of the Genital Organs of Woman. By Chas. Debierre, Professor of Anatomy in the Medical Faculty at Lille. With 85 illustrations. Translated by J. Henry C. Simes, M.D., Emeritus Professor of Genito-Urinary and Venereal Diseases in the Philadelphia Polyclinic. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street. 1905. Price, $1.50 net.

This is an admirable little book, containing in the early chapters a full account of the anatomy and development of the genital organs, while the later chapters contain minute descriptions of the various malformations and anomalies of the same. The translation, which has been made by J. Henry C. Simes, of Philadelphia, with the consent of Dr. Debierre, the author, is in all respects satisfactory.

Modern Clinical Medicine.

D. Appleton & Company expect to publish at short intervals a translation of "Die Deutsche Klinik," a publication which is being brought out in parts in the German language. The articles upon the various diseases have been written by the most eminent men in Germany. Professors Leyden and Klemperer are the editors of the German work, and the articles are written by such well-known authorities as Leube, Ewald, Boas, Baginsky, Liebermeister, Eichhorst, Strumpell, Jurgenes, Ehrlich, Grawitz, Binz, Nothnagel, Gerhardt, Loeffler, Krafft-Ebing, Hoffa, Ortner, Kaposi, and many others whose names are as familiar to you as the above-mentioned.

It is the plan to publish this work in several volumes, the entire work to be translated and edited under the general supervision of Dr. Julius L. Salinger, of Philadelphia, Pa. Each volume in the series will have a special editor.

The first volume of "Modern Clinical Medicine," "Infectious Diseases," will be published on the 3rd of May, 1905. This volume will be edited, with annotations, by Dr. J. C. Wilson, Professor of Medicine, at the Jefferson Medical College, Philadelphia, Pa. The second volume, which will appear shortly after the first, will consist of "Constitutional Diseases and Diseases of the Blood."

The Eye, Mind, Energy and Matter. By CHALMERS PRENTICE, M.D., Chicago. Published by the Author.

This is an original book. Its basic idea is the relief of eye-strain. Hailing from the West, one expects to find in it advanced ideas. Some of the ideas are so far in advance of what is generally held that many will not accept them. For instance, eye-strain is indicated as a cause for diabetes. In fevers, the author claims to be able always to lower the temperature by proper glasses. By relieving brain-strain, it would seem that he can prevent many cases of heart failure and apoplexy. He claims to benefit consumptives—and he can positively cure drunkenness, his words being "the latest discovery of its cure by the use of eye-glasses." It will be news, also, to most anatomists, that the centre for convergence of the eyes is "in the 3rd ventricle" (page 27).

Morang & Co., Toronto, announce a new work on Obstetrics, by Dr. Adam H. Wright, Professor of Obstetrics, University of Toronto.

Miscellaneous.

THE TREATMENT OF MENSTRUAL DISORDERS

With Special Reference to Cases in Women Suffering from Mental Diseases.

By George S. Walker, M.D., Staunton, Va.
First Assistant Physician in charge of Female Department, Western State Hospital, Staunton, Va., etc.

The connection between disorders of menstruation and disorders of the brain and nervous system has long been an established fact. The dependence of the psychic functions of women upon the menstrual function, the effects of the menopause upon mentality, are all subjects that have received the attention of clinicians for many years. It is a well-known fact, correlated to the peculiar connection between the mind and sexual apparatus, that amenorrhea is not infrequently met with in the insane. The problem as to how to treat insanity is one of the most difficult in therapeutics; and in the modern conception of this treatment all agents that tend directly or indirectly to further the equilibration of the mental functions have a legitimate place.

One of the most difficult phases of this problem is the treatment of the menstrual disorders in insane women, and the importance of correcting any such disorders in this class of patients is realized by all who are aware of the fact noted by numerous clinicians, that the improvement of the menstrual function leads to a marked amelioration in the mentality of these patients in very many instances.

In an institution like the hospital with which I am connected, we naturally come face to face frequently enough with the question of treating the amenorrhea that is noted as an accompaniment of mental disease, and for a long time I have been experimenting with various therapeutic agents recommended for the treatment of menstrual disorders without obtaining perfect satisfaction from any, until I tried the method of treatment which I am about to describe.

What I was looking for was a safe and efficient emmenagogue, which gave positive results in cases of amenorrhea, dysmenorrhea, and suppressed menstruation, without either exciting or depressing the patient, without causing any disturbances on the part of the digestive tract, or the urinary tract, such as are met with in the use of most of the remedies classed as emmenagogues.

I knew that Apiol, the active principle of Apium petroselinum, Linne (Parsley), was a substance that had been long known to possess marked emmenagogue properties, but that had not been used extensively in this country on account of certain after-effects connected with its administration. On investigation, I found that Apiol was first isolated by Joret and Homolle in 1855, and was at first recommended for malaria, as a substitute for that specific of specifics—quinine. Later its emmenagogue virtues became known, but it found far less favor in this country than in France, the American physicians being especially prone to reject any remedy that has disagreeable after-effects. Apiol seemed to me the ideal emmenagogue, and I was even tempted to try it, although I had some fears about the effects of its irritant action, when I came across a statement in an article on the subject, to the effect that the Apiol of the market, no matter where purchased, was full of a series of impurities, and that the bad after-effects of this drug were due to these impure elements.

The ordinary Apiol of commerce, it seemed, was simply a mixture of impure principles obtained from parsley by extraction. The question was, therefore, to obtain a preparation of Apiol without the impurities that do the harmful work of the ordinary preparation. A number of chemists in various countries have tried to purify Apiol with varying success, but finally, within the last few years, a pure product was obtained. It seems that the preparation which contains the purest product obtainable, which was prepared by the new process mentioned, is a pharmaceutical compound known as Ergo-Apiol (Smith). Seeking, as I said, a preparation of Apiol which would give satisfactory results in amenorrhea, dysmenorrhea, and suppressed menstruation, especially in the insane, and that would not produce any undesirable after-effects, I determined to try Ergo-Apiol (Smith), a liquid substance dispensed in gelatin capsules, which contains the pure Apiol described above, and in addition a combination of emmenagogues that immediately appealed to me as calculated to enhance the efficiency of the whole remedy, namely, ergot of rye, oil of savin and aloin.

I selected a series of cases in the hospital, each of which was characterized by a more or less pronounced menstrual disorder of some standing, and administered no other medication for the treatment of the disordered menstruation than Ergo-Apiol. I cite, in illustration, three cases in which the remedy in question was employed. They are only examples of the experience I had with it.

Case I.—Miss V. F. Aged twenty-one years. Was admitted June, 1901. She said that she had not menstruated for a year,

and attributed her suffering in body and mind to this fact. She was despondent, and on the verge of committing suicide. The reflex efforts of the uterine disturbance were also manifested by the derangement of function in nearly all the organs. There was entire loss of appetite and a practical cessation of digestion, accompanied by pain after eating. In October, 1901, I began to give her two capsules of Ergo-Apiol (Smith) three times a day until after her expected periods, without any effect. During the month of November I gave her two capsules three times a day, and continued the treatment until December 12th, 1901, when her menstruation returned in a perfectly normal manner. No unpleasant after-effects whatever were noted at any time during this treatment. She improved both mentally and physically during the time of taking this emmenagogue, and her condition was so remarkably ameliorated that she was discharged cured when the menstrual function had been re-established.

Case II.—Miss M. B. S. Aged twenty-four years. Has been suffering from amenorrhea for a year, which persisted in spite of all treatment. She was melancholy, and had a very poor appetite and other disturbances due to her suppressed menstruation. In November, 1901, I began giving her two capsules of Ergo-Apiol (Smith) three times a day. I continued this treatment without any appreciable effect, except that the patient seemed to feel more comfortable, and at times during the month she experienced the subjective sensations accompanying the onset of menstruation. Finally, her menses returned on April 21st, 1902. The menstruation was perfectly normal. One week before the next succeeding period I gave her two capsules of Ergo-Apiol (Smith) three times a day, and when the time came for the onset of the flow it appeared in a normal manner. The remedy was continued in doses of one capsule three times a day while the flow lasted. Since the re-establishment of her normal function the patient has gained both mentally and physically, and regained her mental balance and her usual cheerfulness, so that she was discharged cured.

Case III.—Miss L. D. C. Aged fifteen years. A girl of fine physique, who had first menstruated at the age of nine years, but always very irregularly. The menstruation disappeared for a year and then returned. When admitted she was very irregular with a scanty flow that lasted but one day, and was accompanied by severe pain in the head, loins and pelvis. A week before her expected period in January, 1902, I began giving her one capsule of Ergo-Apiol (Smith) three times a day. At the end of one week her menstruation returned, and lasted four days, the flow being normal in amount and accompanied by very little pain. The same treatment was

pursued in February, with similar good results, and from that time on the function was fully established and remained so. There was a marked improvement in both physical and mental condition, and she was discharged from the hospital cured.

From my experience with Ergo-Apiol (Smith) and from the experience of a number of other observers, whose findings are published in the literature of the past few years, this remedy represents an emmenagogue of the highest type of efficiency combined with the inestimable advantages of safety, trustworthiness and absence of any unpleasant after-effects. It is probable that Ergo-Apiol owes its efficiency to the particular type of Apiol that it contains, the pure product from which all irritating and injurious impurities have been removed. But it is unquestionably also the accessory remedies, which enter into the combination that contribute to the efficiency of the whole. Ergo-Apiol was easily and agreeably taken by all the patients to whom I administered it, and in no case was there any nausea, eructation, or any other gastric disturbance. Unlike most other emmenagogues, it requires only small doses continued for a comparatively short time to bring about the desired therapeutic effects. Ergo-Apiol (Smith) has not only a stimulating effect upon the menstrual function in amenorrhea, but also a tonic effect upon the muscle fibres of the uterus, for after it has been administered for a few months, the uterus is almost always able to resume its function without any further aid from external sources.

In conclusion, I may note the fact that the treatment of amenorrhea in the insane is always a matter of greater difficulty than in persons with normal minds, and that a remedy that produces perfect therapeutic results, such as I have noted with Ergo-Apiol (Smith) in insane women, may be expected to perform the same services even more promptly in the average case of amenorrhea as met with in ordinary family practice. This is proved conclusively in the numerous cases reported by various observers who employed Ergo-Apiol (Smith) in menstrual disorders, and a partial list of whose publications appear in the annexed bibliography. Ergo-Apiol in the shape of capsules administered three times daily in doses of one or two, beginning a little before the expected menses, and continuing through the period, has proven the most efficient, prompt, safe and pleasant emmenagogue that I have ever employed. My experience with the drug was such as to lead me to adopt it as a routine treatment in amenorrhea.

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Original Communications.

CYSTIC DEGENERATION OF THE VILLI OF THE CHORION AND ITS RELATION TO CHORION EPITHELIOMA.*

BY CHAS. J. C. O. HASTINGS, M.D.C.M., L.R.C.P.I., L.M.K.Q.C.P.I.

This condition is usually known as Hydatid Mole, Hydatidiform Mole or Cystic Mole. Among the earlier writers very extraordinary theories were advanced to explain the probable cause of the condition. The earliest I can find any record of is by Amidi early in the sixth century. For several years the prevalent belief was that each vesicle contained a living embryo as is shown by the interesting quotation of Priestley[1], by Ambroise Pare, in which he refers to the Countess Margaret having brought forth at one birth 365 infants, whereof 182 were said to be males, 182 females and the odd one a hermaprodite; and it was not until early in the seventeenth century that it was considered to be due to some disease of the ovum. No more definite explanation for the condition was suggested until the beginning of the present century, and then it was claimed that the vesicular condition was due to the presence of the echinococcus. Velpeau[2] was the first to discover that the cysts were simply the distended villi of the chorion. This was confirmed by microscopic examination by Prof. Robin[3], which shewed that the hydatidiform vesicles had all the anatomical characteristics of the walls of the villi of the chorion.

Many attempts have been made to explain the cause of this cystic degeneration, such as hypertrophy, œdema, disease of the blood, vessels, disease of the lymphatics and degeneration of

*Read before the Ontario Medical Association, June, 1904.

the mucous substances within the villi, continuous with the substances within the cord (Virchow,) and a degeneration of the epithelial cells derived from the decidua which replaces the epithelial covering of the chorion (exochorion). The process usually begins when the villi are equally developed over the whole ovum, that is, before the third month, as after that period the villi of the chorion atrophy over the whole periphery of the ovum.

The disease usually involves the whole chorion, but occasionally the placental portion alone is involved. In these cases the disease began after the atrophy of the villi had taken place over the extra-placental portion of the chorion.

Virchow, in 1853, expressed the opinion that it was a true myxoma of the endochorion, the exochorion not necessarily taking part in the morbid process. This view was universally accepted until 1895, when the investigations of Marchand[4] demonstrated that it was the epithelial covering of the villi, more than the stroma, that was affected, and that both the syncitium and Langhan's layers of cells underwent profuse and irregular proliferation, penetrating Nitabucks' fibrin-layer and making their way into the depth of the decidua, and occasionally into the uterine musculature as well. At the same time the blood-vessels of the terminal villi disappeared and the stroma degenerated, the cells presenting a necrotic appearance. The fluid contents of the vesicles failed to give the characteristic reaction for mucin, in consequence of which Marchand decided that the condition was one of œdema. This decision, I believe, has been accepted and confirmed by all leading pathologists.

Etiology.—The cause or causes of vesicular mole are not known. Both a fetal and a maternal origin have been suggested, but the weight of authority at present seems to incline towards favoring a maternal causation, considering the death of the fetus as secondary. It is supposed, however, to be caused by a disturbed maternal circulation. Owing to this failure in the circulation the connective tissue of the villi degenerates and a serous infiltration takes place. The proliferation of the syncitium and Langhan's layer being due to their penetrating deeper into the decidua to get adequate nourishment. Syphilis, tuberculosis and endometritis are mentioned among the predisposing causes. Virchow considers the primary factor to be disease of the decidua. In most cases the mother is a multipara and over thirty years of age. In 212 cases collected by Findlay, the majority of them occurred between twenty and thirty years of age. Hydatidiform mole occur in about 1 in 2,000 cases of conception.

Symptoms.—The symptoms usually present themselves before the tenth weak; of these there is a group of three which covers

the entire field. 1st. The evidence of pregnancy. 2nd. The disproportionate size of the uterus, which is usually much larger than corresponds to the period of pregnancy unaccompanied with any evidence of the presence of the fetus, either by palpation or percussion. 3rd. A bloody or sero-sanguineous discharge.

The discharge of vesicles, however, is the only positive sign, but this rarely occurs until the process of expulsion has begun. Moor-Madden[5] states that before the fourth month it is practically impossible to differentiate cystic degeneration of the chorion from normal pregnancy unless some vesicles should chance to be discharged.

Treatment.—When the diagnosis is established the indication is to empty the uterus at once. The cervix may be dilated with steel dilators or the Barnes bag, and then the finger, aided by the long-handled ovum forceps, should be used for the removal of the neoplasm, but the danger of rupturing the very thin and attenuated walls must be remembered, therefore all intra-uterine manipulation must be gentle.

It is a good plan to make counter pressure over the abdomen while working within the uterus, as the great danger is hemorrhage, which cannot be controlled until the uterus is firmly retracted. The cysts must be cleared out rapidly, followed by the use of hot irrigation and hypodermic injections of ergot. The curette is not safe in these cases, as it may readily perforate the uterine tissue, while its use is sometimes necessary when cysts are imbedded in the decidua, for their thorough removal undoubtedly diminishes the likelihood of subsequent chorion-epithelioma.

The liability to septic infection calls for strict asepsis during the abortion, as well as afterwards, but with the most extreme precautions sepsis may occurr, having its focus in a retained cyst.

The cysts sometimes penetrate the walls of the uterus to the peritoneal coat. And a case has been reported of fatal hemorrhage into the peritoneal cavity.

Description.—The vesicles vary in size from that of a small currant to that of a chestnut. Their mode of attachment one to another, makes the so-called resemblance to a bunch of grapes incorrect. They are not attached by the stalks to branches of a main stem, but each vesicle is attached by a pedicle to another cyst, and the first of the series, that nearest the ovum, springs direct from the outer surface of the chorion. The pedunculated structure intervening between the cysts, represents the unaltered tissue of the villi. When the vesicles are discharged separately with the blood-stained fluid, they resemble very closely white currants in red-currant juice.

In some cases the embryo disappears altogether. In a few it may be found, but insignificant and blighted, the degeneration of the villi preceding and determining the death of the embyro. In these there is generally present some portion of the placental structure which is free from vesicular degeneration. From a medical legal standpoint it is important to remember that this condition is essentially the result of conception.

Report of Cases.

Case 1.—Mrs. W. aged 25 years, primipara, had had a miscarriage about one year previous; and when I was ca led to see her, I found her in labor, having completed her fourth month's gestation. On examination found the uterus about the size of a six months' gestation; a small vagina; the os far up and slightly dilated and very rigid; some blood escaping from the os; pains quite severe and frequent. After being in labor for about six hours, on going to make a second examination found that some vesicles had escaped which at once explained the character of the case. At this time the patient was losing considerable blood. After some effort I succeeded in getting two fingers through the os and peeling off the mass, which contained only traces of placental tissues, consisting almost entirely of vesicles, varying in size from 2 to 3 milimeters in diameter, to the size of a large sized nutmeg. I carefully palpated the uterine cavity to be sure that all had come away; gave the patient a full dose of ergot. She made an uneventful recovery.

Case 2.—Mrs. S., aged 30. Second para; one miscarriage. When called to patient found her almost exsanguined; clothing and bedding saturated with blood. Examination revealed a rigid os, slightly dilated; uterus about the size of a three months' gestation. I packed the cervix and vagina with iodoform gauze and had her removed to Grace Hospital, where, under anesthesia, I dilated and emptied the uterus, carefully curetting the whole endometrium, I used the curette in this case, as the uterine walls were not distended beyond that of a normal pregnancy at three months.

Two-thirds of the mass removed in this case was placental tissue, only about one-third having undergone cystic degeneration. The patient made an uninterrupted recovery.

Case 3.—Mrs. N., aged 28. Second para; three miscarriages. When first called to see this patient she had the appearance of one suffering from malignant disease. She gave a history of having had persistent vomiting for over two months and of being three months pregnant. Patient complained of having had a rather profuse discharge at times from the vagina, which on examination proved to be of the typical

red-currant juice character. I had her removed to Grace Hospital. In this case I emptied the uterus with the finger, not using a curette, as the uterus was distended to the degree of a four months' gestation. The patient subsequently developed a well-marked septicemia. I feel confident that this patient infected herself, as she acknowledged to me having used means to bring on the former miscarriages. She subsequently had abscess of both ovaries, which Dr. Ross and myself removed, after which the patient made an uninterrupted recovery. In none of these cases has there been any subsequent trouble.

Let us now briefly review the most important features in connection with the early recognition, diagnosis and treatment of these cases.

1. *Diagnosis*, three points. (1) Rapid increase in size of uterus out of all proportion to the period of gestation. (2) More or less constant bloody, or better, a red currant-juice discharge. (3) Discharge of vesicles; but this unfortunately rarely occurs before the expulsion begins. This of course is the only pathognomonic sign.

2. *Early Recognition.*—The extreme importance of early recognition, in view of the fact that from 20 to 50 per cent. of these cases are followed by chorio-epithelioma, should be borne in mind. It is practically impossible to distinguish between benign and malignant mole.

Do not use a curette, owing to the attenuated conditions of the uterine walls, and after the uterus is emptied explore the uterine cavity with the finger; irrigate and gently pack with sterilized gauze.

3. Keep the patient under observation for months and even years, and in the event of any suspicious symptoms developing, curette and have the scrapings carefully examined by a competent pathologist.

In connection with hydatidiform moles, we are confronted with two very serious conditions, Primary and Secondary.

Primarily we have the danger from hemorrhage, perforation and sepsis. Ten per cent. of the cases collected by Dorland proved fatal.

Secondarily—In view of the fact that chorio-epithelioma, according to the most careful statistics, is preceeded in about thirty per cent. of the cases by a history of hydatidiform mole, every case of this kind should be carefully watched for months after, and if there should be any hemorrhage or offensive discharge the uterus should be dilated and its cavity carefully palpated and curetted, and the contents carefully examined microscopically for evidence of the so called deciduoma maligna, and if found, a hysterectomy performed at once. The early recognition of these cases is most important on account of the danger

of metastasis, found more especially in the vagina, lungs and brain.

The first recognition of this condition, known as deciduoma-malignum, is due to Sänger[6] in a case reported by him in 1889, of a very malignant sarcoma-like growth of the body of the uterus, arising from the body of the uterus, after an abortion, in about the eighth week. This he looked upon as being peculiar to the gravid uterus, that is, containing decidual tissue, and being sarcomatous in character, and, consequently, called it decidua malignum. Several other cases were reported about the same time by both German and French, of a very malignant character, but did not accept altogether Sänger's explanation of the condition. However, in 1889, Sänger[7] published his monograph on the subject, in which he divided them into three classes. (1) Sarcoma deciduacellulare. (2) Sarcoma decidua-cellelare with participation of the chorionic villi. (3) The malignant interstitial hydatidiform mole. These views, however, have proved erroneous, but notwithstanding this, to Sänger is due the honor and merit of being the first to draw the attention of gynecologists and pathologists and paved the way for all subsequent investigation. Gottschalk[8] was the first dissenter from the views of Sänger and emphasized his views that the growth was primarily of fetal tissue, being essentially a sarcoma of the chorion arising from Langhan's layer. Williams, of Hopkins[9] and Marchand[10], published articles about the same time endorsing this view, but to Marchand[11] is due the credit of having, as a result of a careful study of the histology of the placenta and of Peter's ovum, demonstrated that both the syncytium and Langhan's layer are of fetal origin, and that the growth was true chorio-epithelioma. This opinion was at once accepted by all German and French authorities and Williams, of Hopkins. Notwithstanding this, the British Obstetrical Society, in 1896, still maintained that these growths were merely sarcomata.

The most complete and elaborate description in English of this condition, with a report of nearly 200 cases, is that by John H. Teacher[12] of the Anatomical and Pathological Department of the University of Glasgow, and that masterpiece by Risel, of Leipzig[13], 170 pages.

Of the 198 cases reported by Teacher, 113 were preceded by hydatidiform mole, 85 by abortion, 68 by confinement at term and 9 tubal or ovarian. Several cases of chorio-epithelioma in teratoma of the testes, which would seem to be further evidence of Marshand's views of the development from fetal ectoblast; also the histogenetic identity of the two layers which invest the chorionic villi, namely, syncytium and Langhan's layers.

In conclusion, I shall give you the summary of the conclusions of Dr. Teacher as taken from his monograph.

1. The so-called deciduoma malignum is a tumor arising in connection with pregnancy, and originating from the chorionic-epithelium (or its fore-runner the trophoblast), which is of fetal epiblastic origin.

2. That these tumors form quite a characteristic group clinically, pathologically and developmentally, and that they should be classified, neither as sarcomata nor as carcinomata, but as a distinct group. The most appropriate name is chorion-epithelioma malignum. Malignant hydatidiform mole may be treated as a variety of this disease.

3. That in addition to the common tumors developing from pregnancy, there are tumors containing precisely similar structures which are not connected with a pregnancy, and may occur in other parts of the body than the uterus, and in either sex. The most probable explanation of them, is that they are teratomata originating from some structure which has the morphological value of an included matuled fertilized ovum, and this chorion-epitheliomatous tissue represents the actual tropoblast (chorionic-epithelium) of the included ovum.

4. That special care must be exercised in the diagnosis between cases of hydatidiform mole and chorion-epithelioma arising in connection with that condition.

5. That while the prognosis in all cases of chorion-epithelioma is a very grave one, early recognition, followed by prompt radical operation offers a fair chance of recovery. The fact that metastasis has occurred does not necessarily preclude successful operation, although it materially diminishes the chances of success.

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THE SYMPTOMATOLOGY AND DIAGNOSIS OF SMALL-POX FROM A STUDY OF THIRTY-THREE CASES.*

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The subject is of particular interest to the medical profession, not only clinically, because of its terrible ravages when left untrammelled, but also because it is one of the oldest diseases known to medical writers. It is very ancient, dating back between three and four thousand years.

The earliest references to small-pox are to be found in Hindostanese many centuries before the beginning of the Christian era, and next to these come those of the Chinese, which date from the twelfth century, B.C. To an Arabian physician of Bagdad, about 600 A.D., we are indebted for the first accurate treatise upon the subject. It is also thought to have prevailed in early Greece and Rome and to have been the "pesta magna" described by Galen.

During the Middle Ages little is known of the progress of small-pox in Europe, but that it existed is evident from monastic writings recording miraculous cures that happened. Manuscripts in the British Museum, written in England during the tenth century, contain references to its ravages and prayers used in defence or deliverance from these.

In the Dark Ages little is to be found concerning it, but mention of its virulence and prevalence is to be found. So widespread was it that one writer remarks, "all persons are attacked by it in the course of their lives," while another held "that almost every person must have it once."

From the writings of these it is learned that small-pox was one of the most severe and dangerous diseases to which mankind was subject, and that up to the beginning of the nineteenth century it had descended from generation to generation with undiminished violence, and that every effort previously made to check it had failed. Amongst aboriginal races it has proved to be terribly fatal, especially in the New World. The Mexicans died by thousands, while of the American Indians fifty per cent. fell victims to small-pox. This immense loss of human lives was not the sole evil produced by this disease, for a large proportion of the survivors were pitted and disfigured; some lost one of their eyes, others became totally blind, and

*Read before the Post-Graduate Society of Toronto, April 30th, 1905. The photographs shown have been omitted.

many had their constitutions impaired and predisposed to a variety of other diseases.

In recent times we have the history of an epidemic in Montreal nearly as bad, if not quite, as above cited. There in 1885–86 over three thousand died, making 31.3 per cent. of those affected. Up until 1889 the mortality in Ontario averaged 30 per cent.

From then until the present, however, we have to record the occurrence of hundreds of cases of a much milder type occurring throughout the province. Amongst these the mortality ranged from .50 to little less than 1 per cent., a great drop from previous percentages. The reason of this immense decrease in virulence is not known. Some believe this to be caused by the effect of vaccination, and as shall be shown, vaccination has a marked effect. Dr. Hodgetts believes that the present decrease has been too sudden to be accounted for in this way, and some other reason remains to be discovered.

In the spring of 1903 I took charge of an outbreak of small-pox just west of Berlin. This was an offshoot from the Galt epidemic of that time, which will be remembered as having caused considerable anxiety because of a return to something like the old-time mortality. These cases did not originate from the New Ontario lumber-camps, as have most of the cases in the last ten years, but were traced to one of the Old World seaports, the disease having been brought to New York by a sailor and carried here by someone from the former city.

As a full consideration of variola would make a lengthy paper, this will include only two of the most important phases of the subject, its symptomatology and diagnosis; also some of the most typical temperatures and clinical charts will be presented. Among the cases observed were to be found examples of mild and severe, or discrete and confluent variola, examples of varioloid, a small-pox modified by vaccination, and possibly an example of vaccinia, a small-pox modified by passing through the cow and induced in man by vaccination with bovine lymph, or again by inoculation with bovine lymph containing small-pox virus and secured from someone suffering from small-pox.

True small-pox, variola vera, presents surprisingly varied symptoms clinically, and this fact has in the past led to many errors in its diagnosis.

Speaking generally, the period of incubation has been twelve days, but many cases have been observed exceeding this by two, three or five days; and again others, where a shortage of a similar number of days under the usual twelve has occurred. So that cases are on record with incubation periods extending from eight to twenty days. In one of my cases, the only exposure to infection that could be determined occurred twenty

days previous to onset. During this period nothing is complained of by the patient as a rule, although general malaise and headache may be present.

In recent outbreaks, usually the initial symptoms have been very slight, and often the patients have suffered so little discomfort that it has been hard for them to fix any time for the onset. However, in the severer cases at Berlin, such did not obtain. Usually the patient complained of a chill, perhaps several, in the first twenty-four hours. Following this was the intense frontal headache and severe pains in the small of the back, shooting down into the thighs. These are very constant, and with them vomiting may be associated. The temperature rises rapidly to 103° to 105° or 106° in children, pulse becoming rapid, and patient restless. Called at this stage, the patient presents the condition of one in an acute fever, but nothing diagnostic presents, unless one is put on his guard by the pains in back and limbs which are more severe than in any other eruptive fever.

The fever continues usually from three to four days, the temperature falling to normal, or nearly so, with the appearance of the papules. The mildness or severity of the initial symptoms does not give definite information regarding the severity of the attack.

Preceding the papules are to be seen red macules, minute and disappearing on pressure. These appear first on the forehead and wrist. However, they may be more general, and may assume very closely the appearance of a scarlatiniforme, or again of a measly rash. One case that I saw with the Medical Health Officer had a beautiful scarlatinal rash, which would undoubtedly have been diagnosed for scarlet fever had not the small-pox epidemic been present. In this patient, on the following day, the shotty papular condition was present on the forehead and rendered the diagnosis quite certain.

The typical eruption passes in succession from macule to papule, to vesicle, and to pustule, then drying up and scaling off. In certain mild cases and in varioloid it apparently aborts between the papular and vesicular stages, or between the vesicular and pustular, no suppurative fever occurring, or very slight. Ordinarily on the fourth day macules appear first on the forehead. On the fifth day these are all over the body, and those on the face have become papules and are distinctly shotty to the feel. On the sixth day the papules becomes vesicles with umbilication, which is indicative of the approaching pustulation, the depression being the point of primary necrosis. The vesicles are multilocular and do not collapse on pricking. On the eighth day the vesicles have become pustules, globular in shape, greyish in color, due to pus. The surrounding skin is injected and swollen.

The vesicles and pustules vary in size from a good-sized pin-head to that of a split-pea. Usually circular in shape, and with an elevation about equal to the radius, so that they are really half-spheres. If there is a tendency to become confluent, these will present various shapes and those close together will unite and form larger ones, varying from the size of a nickel to a quarter, or even larger, in the very severe cases. The elevation does not increase with the size.

In the palms of the hands and the soles of the feet the vesicles may be from six to seven days later in appearing than on the rest of the body. This may not be mentioned elsewhere, but it obtained in these cases, especially in adults, and of those more noticeably in the ones with epithelium thickened from manual labor. A day or two before appearing apparent tightness and soreness is complained of, but later they give rise to a good deal of pain as well, and the patient is very particular to protect them from anything that might press upon them. The late appearance is probably due to the thickening pithelium and the pain to the tension resulting from the effort to get through.

Following the initial rise and the fall, which is usually on the fourth day, the temperature commences to rise again about the sixth or seventh days and may be long or short, according to the severity of the case. Often there is no stationary period whatever, the temperature rising again immediately as the initial fall is completed. This constitutes the secondary or suppurative fever, and with it the general symptoms return. This usually ranges from 101° to 103°, and lasts about five days or more. On the twelfth day pustules begin to dry and scale off. By the fifteenth day desquamation may be advanced. However, in one case the maturation fever attained to 104° and lasted about two weeks. The tenth day usually sees it at its height. The face and neck become greatly swollen, the latter practically disappearing in some.

The pustules instead of remaining discrete may become confluent. This rarely, if ever, occurs elsewhere than the face and possibly the backs of the hands. The cause is this, as above described, only more severe, both in initial and secondary symptoms. Delirium is likely to occur about the tenth day, but may earlier. Haemorrhagic symptoms may develop, and death occur, patient comatose previously, with pulse gradually becoming feebler and more rapid.

Text-books describe a form called haemorrhagic small-pox, or black small-pox. In the Montreal epidemic there were twenty-seven cases. In this the illness starts with the usual symptoms, but with more intense constitutional disturbance. Mucous and conjunctival haemorrhages occur. Hematuria,

haematemesis and meleana may be noticed. Bleeding into the pock in the vesicular stage may also occur. The earlier the haemorrhage, the poorer the prognosis. I had no cases that could be called distinctly haemorrhagic, although in two of them bleeding into the pocks on the hands and face occurred. Otherwise these patients were not different from the others.

With the severer cases a most troublesome complication is involvement of the eyes. Vesicles appear on the conjunctiva of the under surface of upper and lower eyelids, and may appear even on that of the eye-ball. A catarrhal and purulent conjunctivitis is the result, and it may go on to keratitis, with ulceration and perforation.

More frequent even is the sore throat. This is really a symptom rather than a complication, for in all ordinarily severe cases the buccal mucous membrane has vesicles upon its surface as elsewhere. These may involve the pharynx and larynx as well.

Boils may make their appearance during convalescence. In two of these cases they were present and were very troublesome, keeping the suppurative fever from falling as rapidly as it should.

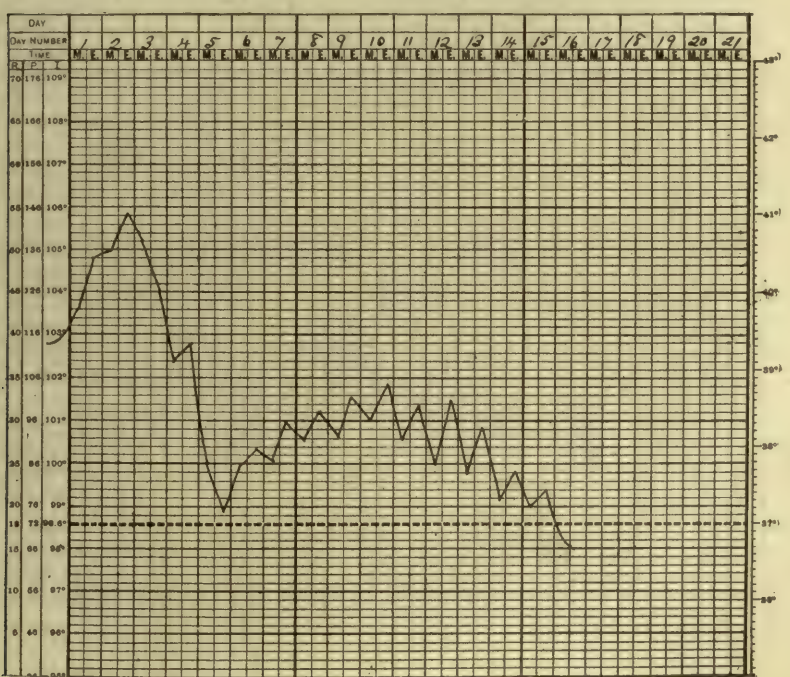
Delirium may be present. In children it is usually limited to the first or initial fever. In adults, that of the early fever may persist, continuing on into the suppurative fever stage, as in two of these cases. It may even become violent, and finally end in coma and death, as in one of these cases.

Usually, early in the third week the pustules begin to break, allowing the pus to exude and dry into crusts, which later fall off. This commences on the face and travels to the rest of the body precisely in the same order as the eruption appeared. In mild cases the secondary fever subsides, and encrustation is complete in the third week. In severe confluent cases it may require one or two weeks longer. Especially slow is this process in the tough epidermis of the hands and feet.

The disease is contagious from the first appearance of the eruption, and possibly earlier. The virus is reproduced most strongly in the skin lesions, but is present also in the secretions and excretions, as well as in the exhalations from the lungs. The virulence of the contagion is said to be in direct relationship to the severity of the attack, although it is well known that severe attacks may result from exposure to varioloid. Probably a great deal depends upon the degree of susceptibility of the person exposed. Merely entering a room for a few seconds where a small-pox rash is present will often suffice to cause an attack, while again others may live in the same house with a case for weeks before developing it, or may even never develop it.

There appears to be a relative immunity ranging from zero where no protective influence exists to that of complete, where patient will not develop the disease. This latter may be natural, as is recorded by some writers who have observed this to obtain. Usually, however, it is secured artificially, either by vaccination or inoculation, or naturally by a previous attack of the disease. None of these are absolute, however; in fact, attacks of small-pox quite often follow varioloid, even within two months, if the patient is re-exposed.

To illustrate the facts above cited regarding variola vera, both discrete and confluent, the following cases will be outlined,



four in adults, two discrete and two confluent, and two in children, discrete:

CASE I.—Variola vera, discrete form, is interesting, showing, as it does, the very high initial rise in temperature, rapid fall, and immediate commencement of the suppurative fever. The extent and severity of the delirium is unusual.

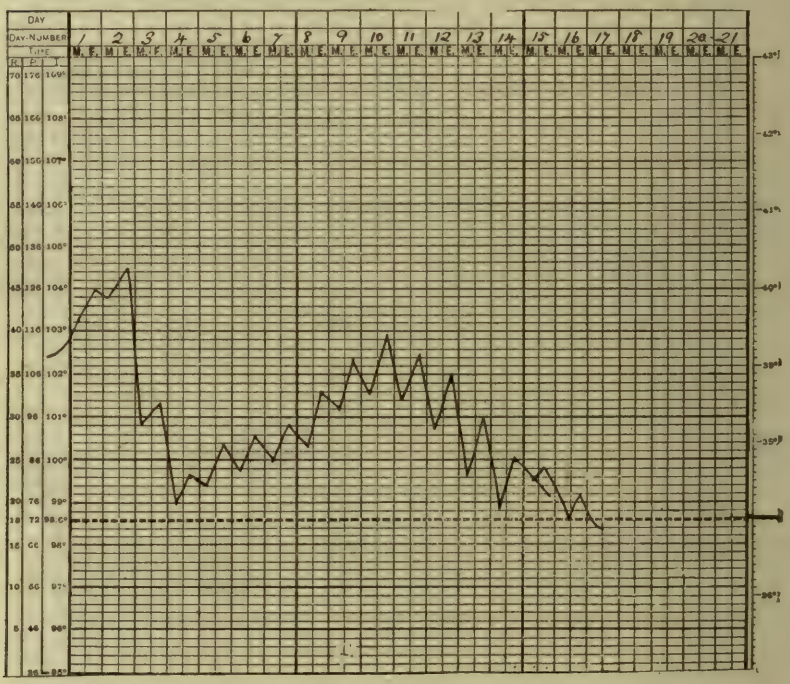
Patient, female; aged 16; unvaccinated. Twelve days after exposure patient fell ill with headache, backache, shooting pains in limbs and nausea. No prodromes.

2nd day.—Temperature very high, 105.8; pulse, 140; respirations, 50.

4th day.—Temperature falling rapidly, and patient becoming delirious.

6th day.—Patient very delirious; papular shotty rash present on face and arms; temperature commencing secondary rise, having been normal on fifth day, as per chart; eruption discrete.

8th day.—Patient quieter; pulse, 136; eruption vesicular on face and hands; papular on body; eye-lids swollen; few vesicles on conjunctiva; not many in mouth.



10th day.—Eruption in late pustular stage on face; early pustular on body; eyes much better; still quite delirious; suppurative fever well marked.

12th day.—Scabs drying on face; pustules breaking on body; patient becoming rational.

16th day.—Patient feeling well; desquamation proceeding on face and body; temperature normal.

Case II.—Variola vira, discrete form, but more severe than the preceding case, was marked by the following features:—exceptionally long incubation period with such mild prodromes as slight headaches, general pains and malaise during the last

week, very severe initial symptoms, an early scarlatiniforme rash, and the late appearance of the eruption on the palms of the hands and on the soles of the feet:

Patient, male; aged 40; unvaccinated. Twenty days after the only known exposure patient developed a severe headache, with great pain in back, shooting into loins; nauseated.

2nd day.—See chart. Temperature, 104.4; pulse, 120; respirations, 26.

4th day.—Temperature falling and patient easier; macular rash on face and hands of scarlatiniforme type; would probably have been diagnosed for scarlatina but for presence of epidemic.

6th day.—Eruption papular and quite shotty; present on face and hands; also plentiful in the hair.

8th day.—Eruption vesicular on face; many umbilicated; papular on body.

10th day.—Eruption pustular on face and arms, and very numerous, some almost confluent; vesicular on body; lower part of face swelling; eyes free, but throat slightly sore.

12th day.—Face in late pustular stage pustules nearly ready to burst; lower part of face greatly swollen, and neck not recognizable as such; maturation fever well established; palms of hands and soles of feet getting sore; pulse 115, but good.

14th day.—Pustules on face breaking; neck and face not so swollen; pustular on trunk; shotty elevations appearing on palms and soles practically a week after their appearance elsewhere; very sore and painful.

16th day.—Temperature falling; face scaling; swelling gone; pustules breaking on body; eruption on palms and soles vesicular but filled with blood instead of serum; patient comfortable.

18th day.—Scaling and crusting proceeding rapidly; temperature normal. Some days later eruption on palms and soles began to dry up. If left alone they would not have scaled inside of three weeks longer, but patient dug them out with a knife a little later.

Case III.—Variola vera, confluent form, and very severe. In this case the eruption apparently never reached the pustular stage, but presented as huge bullae unilocular and filled with a sero-sanguineous fluid.

Patient a female, aged 35; unvaccinated. Twelve days after exposure patient became ill with severe headache and strong shooting pains in back and thighs. Nauseated also.

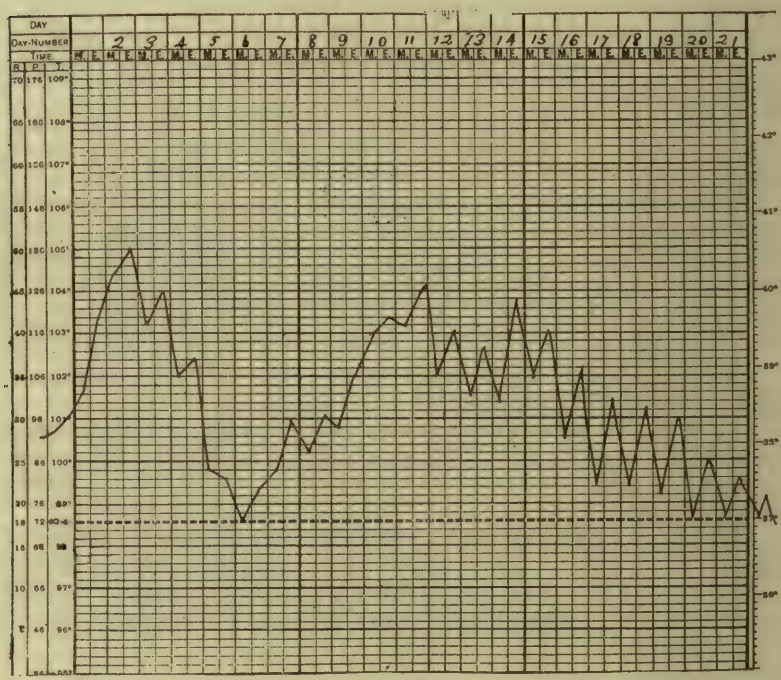
2nd day.—Temperature, 105; following day, 104. Pulse, 120; respirations, 33.

6th day.—Temperature normal, and rash appearing as papules on face and hands only. Quite shotty.

8th day.—Suppurative fever commencing. Eruption papular on body; vesicular on face.

10th to 12th days.—Secondary fever at its height. Eruption pustular and confluent in face and hands. Many were as large as a dime and others as a quarter, and were filled with serum, making them appear as large blisters. These were unilocular, and collapsed on being pricked. Throat quite sore from presence of eruption in mouth and pharynx.

14th to 16th days.—Eruption breaking on face and commencing to dry. On body pustular and quite confluent, which is unusual, usually being limited to face and hands. Throat improving. Suppurative character of fever well shown in chart.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R. P. T.
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100°
99°
98°
97°
96°

18th to 20th days.—Scabs all off of face, and mostly off of body. Patient felt well. At this time it was possible to gather at any visit whole handfuls of scales from the sheets. After scaling, face and forearms had a lobster-like appearance. The eruption was so markedly confluent, and so large and numerous, that little or no skin remained free on trunk or face and arms. No scarring probably resulted, as they were chiefly serous, and true skin did not appear to be involved.

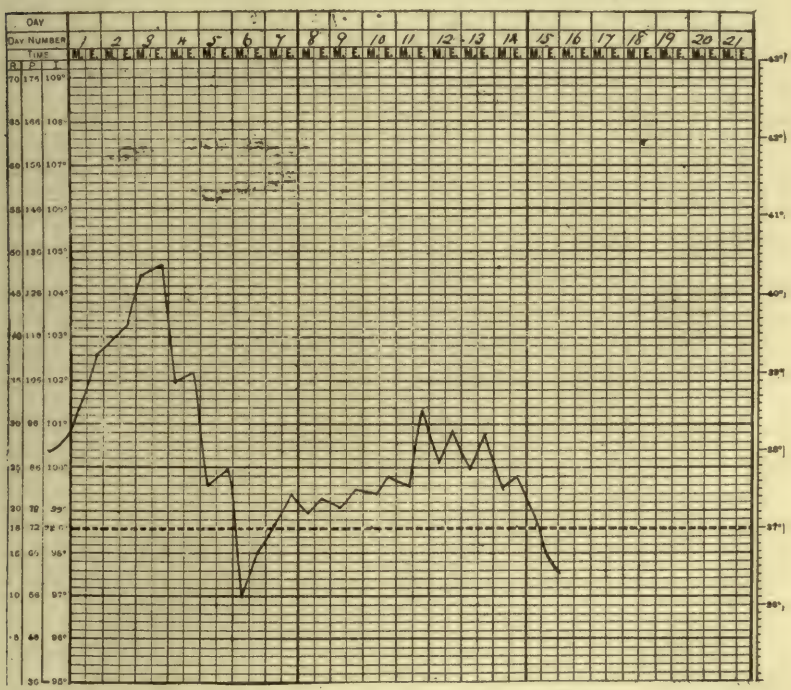
Case IV.—Variola vera, confluent. Very severe, and ending fatally. Delirium commenced as initial fever was falling and

eruption appearing, and continued throughout, becoming violent about 11th day and then passing into coma. Eyes and throat very very bad. Eruption in pustular stage did not dry, but became putrescent with a terrible odor.

Patient, male, aged 39, unvaccinated. Ten days after exposure patient complained of headache and general malaise.

2nd day.—Very severe backache extending to extremities; bad headache; nauseated and vomiting. Initial fever, 105.6; pulse, 106; respirations, 30.

4th day.—Fever falling rapidly; patient commencing to wander.



6th day.—Temperature subnormal, as per chart. Pulse, 69; respirations, 18. Papular shotty rash appearing on face and backs of hands.

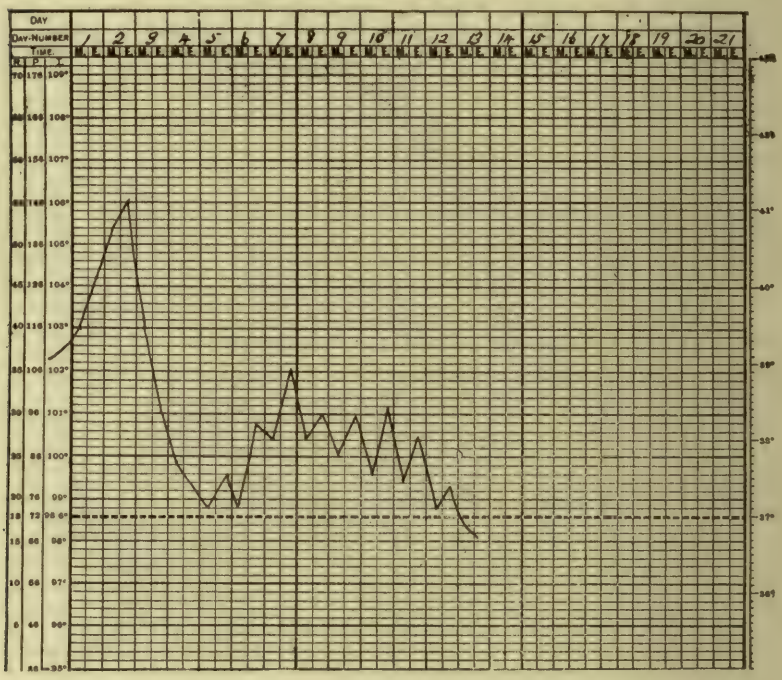
8th day.—Suppurative fever commencing. Eruption pustular and confluent on face; vesicular on arms and papular on trunk; scalp full of pustules; eyes having several on conjunctiva; throat involved; patient quite delirious.

10th day.—Eruption pustular all over; breaking on face and scalp; eyes discharging pus, but cornea clear; maturation fever at its height; pulse, 125, and of poor quality.

12th day.—Eruption drying on face and arms, and breaking on body; patient violently delirious, but getting much weaker; pulse rapid and feeble; keratitis and iritis added to the suppurative conjunctivitis; patient unable to swallow.

16th day.—Pustules all broken but not drying as they should; odor very bad, that of putrefaction; patient comatose; pulse, 130, and very feeble; temperature subnormal; patient dying of intoxication by small-pox virus.

The foregoing has been a consideration of small-pox in the adult. In children the disease is usually milder in its effects, and runs a shorter course if uncomplicated. The initial rise


DAY
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is higher, going to 106° or more; falls more rapidly, and with its fall appears the eruption. It has been noticed by some that the higher the initial rise the lower the secondary fever. This is more likely to obtain in the case of children. The eruption may be very plentiful but is rarely confluent, and goes through the various stages more rapidly. The initial symptoms are not so marked, except for the vomiting, which is usually more constant than in adults. The older the patient if unvaccinated, the more severe will the disease be if attacked, and according to this rule, children take it less severely. In illustration two cases are cited.

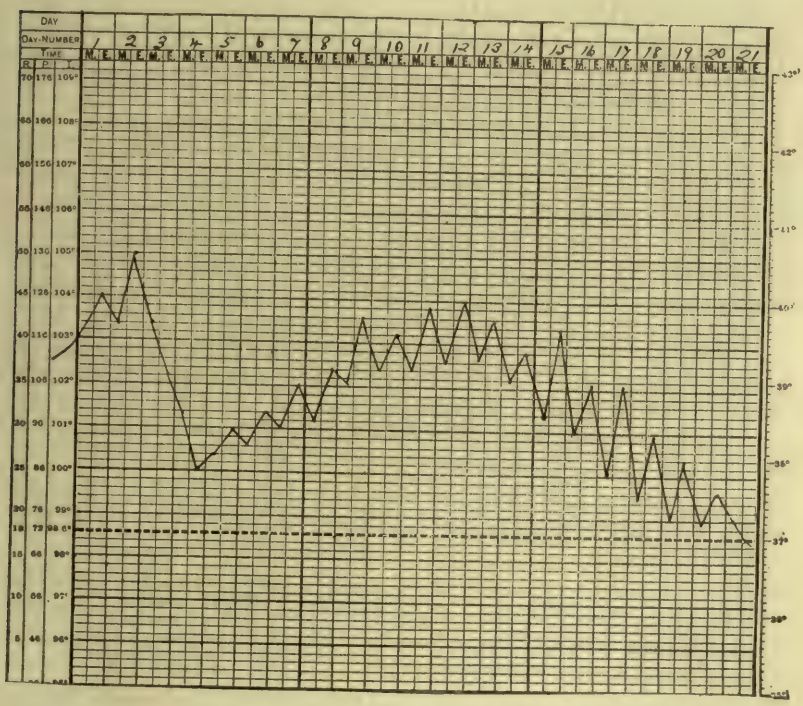
Case V.—Variola vera, discrete, shows the very high initial rise, rapid fall, and rapid developmeot of eruption, all over in less than two weeks.

Patient, male, aged 4; unvaccinated. Nine days after exposure patient taken ill with headache and vomiting of mucous. Fever 104, as in chart.

2nd day.—Maximum temperature; vomiting ceased.

4th day.—Temperature falling, and macular rash appearing on forehead.

6th day.—Eruption papular on face and hands; discrete but quite thick.



7th day.—Eruption vesicular on face; papules appearing on trunk.

8th day.—Eruption pustular on face; vesicular on trunk.

10th day.—Pustules broken; scabs formed; those on face falling off; temperature normal, and patient feeling well.

Case VI.—Variola vera, discrete, also shows a high initial rise and rapid fall, but the suppurative fever is very marked, owing to a complication by boils.

Patient, male, aged 7; unvaccinated. Eleven days after exposure patient taken ill with high fever, headache, backache and vomiting.

2nd day.—Fever 105°, as per chart; pulse, 150, and respirations, 46; also delirious, which continued until fourth day, when temperature was falling and rash appearing.

6th day.—Eruption vesicular on face and hands.

8th day.—Pustular on face and hands; vesicular on trunk; eye-lids swollen; maturation fever well established.

10th day.—Pustules breaking on face; becoming pustular on body.

12th day.—Scaling on face; scabs forming on body; eyes better; patient feeling fairly well, but suppuration fever up to 104°.

16th day.—Fever remaining up, and several boils developing on body and legs.

20th day.—Suppurative fever falling and scaling completed, but boils still troublesome.

24th day.—Boils disappearing and patient feeling well.

The above description of the course of the disease and of individual cases is as I found it, but it must be remembered that a large percentage of the cases occurring in the province are much milder and form what some have wrongly called modified small-pox, and yet unvaccinated so that the term is quite misleading. Many of these very closely resemble true varioloid cases.

In these the prodromata are mild and insidious from a passing malaise to headache, and more or less severe headache. Many describe it as simulating la grippe more than anything else, and have followed their usual occupation throughout the whole progress of the disease.

On the third day or sooner the temperature drops to normal or submormal, the eruption appears and thus ends for many their sickness.

The eruption appears first as macule and so on, and involves the body in the order as above described. The progress from one to another is more rapid however, and at any stage is liable to cease, the rash aborting. Many of the macules may not become papules, while these may not become vesicles, of which in turn a number will abort before becoming even slightly pustular.

The rash is always discrete and the individual papules may be far apart, a limited number only appearing.

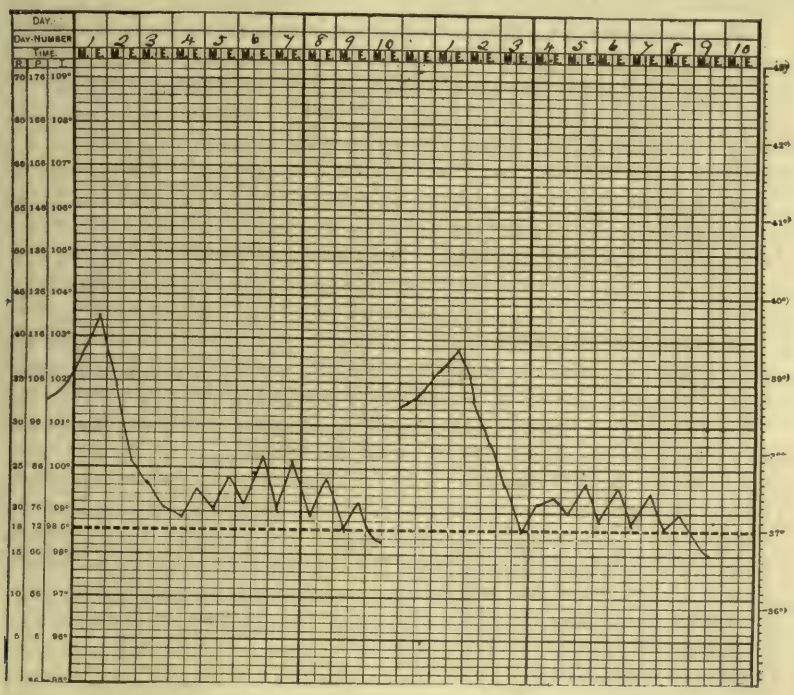
Among individuals exposed to the same contagion, some will take it very severely and others very mildly. In illustration of this mild form of variola vera, the first temperature of chart may be taken.

Patient, a male, aged 20, unvaccinated. The initial symptoms were slight. Temperature fell rapidly and eruption appeared

early and ran a short course, several of the papules and vesicles absorting. Patient never ill.

Varioloid, the form of small-pox affecting persons who have been vaccinated, is often still milder than the last case cited. It may set in with severe headache and backache, but more commonly the initial symptoms are very mild. The papules are usually few in number and confined to face and hands, appearing on the third day. Vesiculation and maturation is rapid and often no secondary fever occurs.

Of the three cases in this series, all were very mild, not equiring to go to bed. Some slight headache and dizziness



was complained of, and in two of these only a very few papules appeared, and would never have been called small-pox aside from an epidemic. The other case, whose temperature line appears as the second figure in chart above, had perhaps two dozen papules on face. These rapidly became vesicular, then pustular, drying up and falling off in from seven to eight days.

Vaccinia, the form of small-pox modified by transmission through the cow or the horse, and induced in man by inoculation or vaccination with the animal lymph, creates a protective immunity lasting from ten to fifteen years or longer. On the

third day, in a typical case, a papule appears at site of vaccination. This reaches the pustular stage about the end of the second week and by the end of the third week will have formed a scab ready to separate. If the patient was very susceptible, a severer form may occur in which, beside the initial pock, artificially produced, several others exactly similar to those of true small-pox may appear in the neighborhood. In fact, if very severe, these may also appear on the body as well. One of the adults vaccinated while in quarantine, exhibited a fairly severe vaccinia. Beside the pock, at seat of vaccination, several others appeared on the arm which was very red and inflamed. Patient was quite ill.

Vaccination is of no avail unless performed sufficiently early for its effect to be produced before the commencement of the incubation period. Several patients were vaccinated during the incubation period, there being no way to determine whether they had contracted smallpox or not, although exposed. The vaccinia pocks, two or three as the case might be, took their usual course, and during their development the ordinary variola rash appeared and seemed not to be effected at all by the former.

While in the unvaccinated in former epidemics, the mortality has been 35 per cent., that of the vaccinated was reduced to 8 per cent.

In the present instance, of the forty-five persons under quarantine, thirty were unvaccinated, and everyone of these was attacked, the adults much more severely than the children. Of these thirty attacked three died, making the mortality 10 per cent. The fatal cases were all in adults.

Of the fifteen vaccinated only three were affected, and that very mildly as we have seen. Not one of the fifteen had been vaccinated within ten years and others not within twenty, while of the three attacked, one had not been vaccinated within thirty years. This goes to prove the great value of vaccination as a preventive of small-pox, and would lead one to believe the immunity so created to be of value even for thirty years. It may not necessarily render one absolutely immune, but it will render the disease much less severe if attacked. Of the fatal cases in the unvaccinated under consideration, the patients were between thirty-five and forty-five, while two of the varioloid cases in the vaccinated were over fifty and hadn't been vaccinated inside of ten years. The comparison between the severity in the one and the mildness in the other, who were also older subjects, proves the value of vaccination as a protection. In the literature upon the subject very convincing statistics are given regarding vaccinia. It is also proved that the greater the number of cicatrices the more absolute is the immunity.

Seven years has been given as the duration of immunity secured by a successful vaccination. However, if an outbreak should occur, it would be wise to be re-vaccinated in any case. If a successful take results, one was not immune. The greater the reaction in vaccinia, the greater would have been the danger from variola if attacked.

Therefore, those opposed to vaccination because of the discomfort and soreness of the arm entailed, if vaccinated, and a very sore arm and some constitutional disturbance result, ought yet to be correspondingly grateful, for had variola been contracted the probability is that they would have succumbed to its effects. This is, of course, debarring those cases in which infection of the arm results either from poor lymph or carelessness at time of vaccination, or later at vesicular or pustular stage of pock from improper dressing. All are usually very careful to dress arm properly at time of vaccination, but many do not wear any protective dressing whatever thereafter. The vesicle is easily ruptured and a channel for infection opened up.

Of late years the diagnosis of small-pox has been rendered extremely difficult because of the lack of opportunity for studying it clinically. The mildness of many cases in recent epidemics has also led to many errors.

Among the eruptive fevers, measles, scarlet-fever, and varicella will require to be excluded, and of these the last-mentioned will give the most trouble. Primary cases are the hardest to determine, of course, but during an epidemic the severity of the invasion or initial symptoms ought to put one on guard. The high temperature rapidly attained, severe headache, and especially the pain in small of the back and running into thighs, is very characteristic. These are more severe than in any other condition.

The early scarlatinal rash of small-pox may simulate scarlatina very closely, but it is not so widely distributed nor does it exist so long, that of small-pox becoming papular within twenty-four hours. Ordinarily, incubation is only one-third as long in scarlatina. The initial rash may also resemble measles, but here the character of the prodromes, coryza, conjunctivitis and rhinitis will assist. Koplik's spots may also be looked for.

Chicken-pox, being much like small-pox, most frequently leads to error. In the mildest cases it may be impossible to tell without referring to other and more severe cases for something diagnostic. The following are the chief characteristics distinguishing the two:

Chicken-pox is chiefly confined to children, being only occasionally seen in adults.

In it the prodromes are but slightly marked, and often are entirely wanting.

The eruption of varicella is more abundant on the trunk than elsewhere, and often appears first on those portions of the body covered by clothing. While in small-pox the eruption is much more apparent in the face, and then the hands, than elsewhere, and always appears first on these parts.

Chicken-pox rapidly runs its course, usually in about one-third the time small-pox requires.

The eruption rarely has the shotty feel of small-pox in the papular stages. The vesicles are more superficial, and the skin between them is not so inflamed and infiltrated. They are unilocular and collapse on pricking. They become pustular much more quickly than do those of small-pox. After desquamation there usually is no scar, and they leave a red rather than a pigmented spot.

Speaking generally, it may be said that a mildly febrile eruption appearing without prodromal symptoms, and desiccating on the second or third day, should be regarded as varicella, while an acute eruptive fever with distinctly high temperature, severe headache and backache, and an eruption going from papules to vesicles and vesico-pustules, should be regarded as small-pox.

In some recent cases medical men have persisted in diagnosing small-pox as impetigo contagiosa. The chief points in differential diagnosis of this disease are:

It is a skin affection, rarely accompanied at any stage of its progress by an elevation of temperature.

There are no initial symptoms.

Does not begin as a papule but as a vesicle or vesico-pustule, and appears chiefly on the exposed parts—face and hands.

Crusts appear as if stuck on, being very superficial. They are very friable, and upon removal the base is covered with pus. After healing there is no scar.

Spreads by inoculation either in others or in the same individual, the infecting material being carried by finger-nails usually.

The rash of secondary syphilis may resemble variola. It is ushered in by fever and accompanying pains and aches, making the resemblance more complete. The distinguishing points are these:

The slight amount of rash on face as compared with the body.

Papules have not the shotty feel.

History of initial lesion, and upon examination other syphilitic symptoms usually can be found.

Unfortunately, small-pox has also been diagnosed as acne. Acne is a skin affection occuring usually at puberty. In it there are no initial symptoms. Eruption has a black central

dot in each pustule and occurs chiefly on face, shoulders and back.

Cerebro-spinal meningitis has been mistaken for hemorrhagic small-pox. Pustular glanders has also been confused with this disease, as has also urticaria papulosa.

In conclusion, it must be said, that the diagnosis is not easy, nor are the opportunities common for studying it clinically. Errors in the detection of small-pox have been very common and a plea should be made for a closer study of the subject towards which end, I hope, the above may be found helpful.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

The Uses of Roentgen Rays in Medical Practice.

According to Innelmann (*Berlin klin. Woch.*), one of the most important uses of Roentgen Rays in medicine is in the controlling of the effects of accidents, in cases when claims for compensation are made. He considers it necessary to prepare a skiagraph in every such case, but inasmuch as badly-produced pictures lead to confusion, the photograph should be carried out by a skilled Roentgographist. He gives some examples of wrong deductions having been made from faulty pictures. It is also necessary for the person controlling such cases that he be acquainted with all possible abnormalities of the skeleton. As an example, he cities a case in which the existence of a so-called "os intermedium cruris" gave the impression that a fracture was present. Sesamoid bones must also be recognized as such. The existence of splinters of metal damaging bones can be recognized, but one must at the same time be careful to determine whether there is any independent disease of the bone, which has nothing to do with the accident. Sarcoma, syphilis and tuberculosis may affect a bone which becomes injured. He points out that one must consider if the functional damage is in proportion to the supposed cause. Again, it requires a very careful judge to determine whether a healed fracture has left any avoidable laming behind. It is extremely rare to come across an ideal union of a fracture when seen in Roentgograph. In medical jurisprudence also the use of X-rays are of importance. As instances, he speaks of a case in which, although the accused stated that he only fired one shot, five bullets were found in the skull, and in another case a small portion of the blade of a knife was seen in the interior of the skull, proving that the stabbing had been carried out with a knife. Another very important point in jurisprudence can be cleared up by means of the rays. In judging whether an infant has has died during or after the birth, or whether it was capable of existing (in fetal life) apart from the mother, an X-ray photograph will be able to settle at once whether the fetus has passed the thirtieth week, after which it is believed to be capable of independent life by attention to the skeleton. The ossification

centre in the distal end of the femur first appears at this time, and can readily be detected by these means. The lungs of a newborn infant which has not breathed show a shadow, while those of an infant which has breathed does not do so. If the lungs have been artifically blown up, one sees transparent portions near the main bronchi. For the military surgeon and for the medical referee of a life insurance company, X-rays, too, are of great importance. Beside changes in the skeleton, the rays are able to demonstrate earlier than other methods of examination the existence of disease of the lungs and aneurysm of the aorta. The chief point which he emphasizes is that the examination must be entrusted to one well practised in skiagraphy.—*British Medical Journal.*

Rest as a Curative Agent.

The therapeutic value of rest in the medical management of acute inflammatory and infectious processes is not fully appreciated. Its effect on the circulation is significant. The average daily output of energy by the heart is 400,000 foot pounds; by simple rest in bed it is possible to save the heart a daily expenditure of 50,000 foot pounds of energy. The faster the heart beats the less time it has for rest—that is, the sum total of the periods of rest or diastole is much greater when the pulse is, say, 70 per minute than when it is 120 per minute; so that decreasing the pulse-rate saves the heart. Again, in the recumbent position this organ is saved the labor of elevating that part of the blood which goes to parts above its own level. Rest of the voluntary muscles is still more important. An immense amount of energy evolved in muscle movement is conserved by rest in bed. Muscle rest also secures rest for the motor neurones. The larger part of the nervous system is relieved of its work when the muscles are dormant. Decreasing the output of energy relieves the digestive, assimilative and eliminative organs of a corresponding amount of work.—*G. Wehrle, in Therapeutic Gazette.*

The Treatment of Appendicitis.

Maragliano (*Gaz. d. Osped.*, March) pleads strongly for operation in every case of appendicitis, no matter what stage the disease is in. When one considers the large variety in type in cases of appendicitis, the possibility that even a mild case may suddenly change, within a few hours or less, and become alarming, he considers operation is the only logical treatment. Those cases which would have got better if left alone are none the worse for operation, and some of the cases which are lost from too late operation might be saved. He, of course, recog-

nizes the fact that a very large number of cases of appendicitis get perfectly well under medical treatment, and that some of these may be successfully operated upon in the quiescent stage—that is, after the acute symptoms are passed. But, on the other hand, if one waits until the acute symptoms have subsided, there is no doubt some cases will never survive, and the chance of operation has gone by forever. Moreover, under his teaching no one need ever lament that surgical aid has been employed too late; on the other hand, he is perhaps too optimistic as to the practically harmless nature of the early surgical interference he advocates. Further, he suggests that the control of the question of operation should be left entirely to the physician, who, on his part should obtain surgical assistance in every case of appendicitis as soon as it is diagnosed, and insist on immediate operation.—*Brit. Med. Journal.*

Clinical Examination of the Urine.—Cabot (*Jour. A. M. A.*) has made a critical study of the commoner methods of urinary analysis, and compared the clinical diagnosis with the pathological findings. His conclusions are that in many cases marked urinary anomalies may exist without demonstrable changes in the kidneys, and also that there may be sometimes serious lesions of the urinary organs, which cannot be detected by the analysis of the urine. Albumin may be present in large amounts and yet at *post-mortem* the kidneys are perfectly normal. "Our clinical inferences," he says, "from the amount or percentage of albumin to the anatomic lesions in the kidney are often far too direct." Fatigue for instance, not usually classed as a disease, is capable of bringing into the urine a quantity of albumin and casts equalling that found in the majority of cases of anatomical nephritis.

A great number of useless urea estimations are made. We are apt to forget that the amount of urea excreted in the urine depends not merely on the functionary power of the kidney, but also on the amount of nitrogenous food absorbed, and on the catabolism of the whole body. The output of urea is also affected by exercise, the free ingestion of water and disturbances of digestion. A rough estimate of the power of the kidney may be quickly formed by noting the specific gravity and 24-hour quantity of urine. The quantitative estimation of the other urinary solids are useless to the clinician.

Hyaline and granular casts in small numbers are found in healthy urine, and more than two-thirds of all persons over 50 years of age pass urine containing a slight trace of albumin with casts.

Cabot concludes that the most reliable data about the urine

are those most simply and quickly obtained—the twenty-four hour quantity, the specific gravity and the color.

Long has found (*Jour. A. M. A.*, April 1) that the average volume of 1500-2000 c. c., as usually stated, is too high, and the specific gravity is correspondingly low. He found in twenty-four healthy men an average of 1,167 c. c., with extremes of 765 c.c. and 1,950 c. c. The average specific gravity was 1,025. This bears out what most life assurance examiners in this country have often commented on.

F. A. C.

Salt and Bright's Disease.

It has several times been put forward that sodium chloride taken in excess is injurious to the subjects of Bright's disease, and alleviation of the conditions arising in the course of that disease has been procured by exclusion of sodium chloride from the diet. It is still a question, however, whether the ingestion of excessive quantities of the salt may act as a causative factor in the production of the disease. It is true, as Castaigne showed, that the administration of large quantities of salt may occasionally give rise to a passing albuminuria; the failure to produce this effect in the majority of cases made, however, the observer suspect that where it occured there was already a lesion, or at least a predisposition of the kidneys. More recently, Silvestri has collected several cases where young subjects, owing to a peculiar craving, consumed large quantities of salt, and subsequently developed typical parenchymatous nephritis. He believes the sequence to be casual, and he thinks that the lesion of the kidney is due primarily to irritation of the epithelium during the elimination of the salt.—*Medical Press and Circular.*

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. McILWRAITH, FRED. FENTON AND HELEN MacMURCHY.

Puerperal Fever

The March number of the *Practitioner* (English) was devoted entirely to Puerperal Fever. In our last issue we published its article on "Asepsis" in the Rotunda Hospital, Dublin, by Dr. Tweedie, the master. The Dublin School is essentially practical, and its methods are always of interest to the obstetric world. There is considerable difference of opinion as to the best methods of preparing the hands for obstetrical work. At the Rotunda the hands are first washed with soap

and water, and then immersed in a 1-500 sublimate corrosive solution for one and one-half minutes. This treatment was adopted in the Burnside Hospital, Toronto, several years ago, but as the corrosive solution had such a bad effect on the skin, lysol was substituted for the corrosive solution for the hands, while the latter solution is now used chiefly for the vulvar dressings. After cleansing the hands, finger stalls or rubber gloves are generally used in Dublin. Rubber gloves have their advantages as well as their disadvantages, but should always be at hand and should always be used in cases of infection.

We are told by Dr. Tweedie that great attention should be paid to lacerations of the perineum, tears of half an inch being counted of sufficient importance to stitch. We think it unfortunate that British obstetricians do not pay more attention to repairs of injuries of the pelvic floor, which are frequently of more importance than the lacerations of the perineum. The placenta is not interfered with until the uterus by its unaided efforts is expelled out into the vagina. We learned many years ago the importance of "watching the uterus" during the third stage. We presume that Dr. Tweedie still considers this important, although we understand that certain British obstetricians have gone to the other extreme, and pay no particular attention to the uterus for twenty minutes after the expulsion of the child. Violent kneading during this time is harmful, but we should take care that clots are not allowed to collect in the uterine cavity. When they are present they should be carefully squeezed out of the uterus, as they generally may be without causing premature separation of the placenta.

Dr. Tweedie tells us that one nurse has charge of three patients and their respective babies. We think our Burnside authorities should carry out a similar rule both in the interest of the nurses who are overworked and the patients who require proper attention.

In cleansing the genitals night and morning a buttock-pan (special design) is placed beneath the patient who is thoroughly washed with soap and water by means of sterile wipes carried in the direction from the pubes to the anus. In the event of high temperature or other symptoms of morbidity the forceps is employed by the nurse in charge for holding the wipes. It was formerly the rule at the Rotunda in estimating the morbidity to consider a temperature of 100.8 as the highest normal limit during the puerperium Recently it has been considered that such a rule as an indication of morbidity is unreliable. They now consider a temperature rising after the first twenty-four hours and remaining above 99° for two consecutive days with a pulse rate of over 89 an indication of morbidity. The latter rule is perhaps better than the former, but neither is

good. In the first place either rule is narrow because two symptoms only are mentioned, while others equally important—such as headache, restlessness, wakefulness, chilly feeling, indigestion, etc., are overlooked. In the second place, when abnormal symptoms arise, no matter how slight they may be, there is no reason why the accoucheur should wait for forty-eight hours before commencing active treatment. In our opinion he should not wait one hour, but should immediately commence fairly active eliminative treatment. It is well enough in connection with the symptoms to get a bacteriological report, but that is a matter of quite secondary importance. The main thing is to commence the treatment at once without waiting for any such report which very frequently gives no definite information.

The author of this very interesting paper tells us in conclusion that there are many points in their aseptic methods which might be considered cumbersome or unnecessary; his reply to any such criticism is that their methods have been evolved gradually in their endeavors to stamp out morbidity. Our own opinion is that their methods are not at all cumbersome, and should be carried out both in the hospital and private practice as carefully and thoroughly as possible. In expressing such an opinion we are referring to their general plan which we should all consider good although we may differ slightly as to some matters of detail. A H. W.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN, M.B., M.D.,C.M.

Eye Strain and Brain Strain.

The *British Medical Journal* is publishing an admirable series of articles on the "Teaching of Hygiene in Schools," No. VI. being devoted to Eye Strain and Brain Strain, in the course of which the following appears:

We have already said that the principal causes of myopia are convergence of the eyes and stooping of the head. It is obvious that everything should be done to prevent these conditions in schools, and in order to accomplish this it is of first importance that every teacher should be impressed with the importance of the following points:

1. An ample supply of light.
2. The light must fall upon the work from the proper direction.
3. The object looked at must be easily distinguished.

4. The object must be so placed as to be seen without stooping.

5. There must be a distance of not less than 10 inches between the eye and the work.

Miss Sayer states that, "At 6 years of age 3 per cent. have seriously bad vision, and 88 per cent. can see $\frac{6}{6}$ with each eye; at 11 years of age 11 per cent. have seriously bad vision, and only 58 per cent. see $\frac{6}{6}$ with each eye. The rest have slight defects."

That myopia scarcely ever exists before the age of five, and that statistics taken in elementary schools by Mr. Priestley Smith and others prove that from that age onwards the numbers of children who suffer from it steadily increase, goes to show that school conditions must be defective.

It should be clearly understood that the points mentioned should be attended to, not only with the object of checking the development of myopia, but also in order to prevent unnecessary strain upon the brain and nervous system of the growing child. The child has not only to see the object but also to take in what it means; the younger the child the greater the strain. The eye and the brain have to be educated while both are at the same time undergoing a process of growth and development.

Quinine in the Treatment of Corneal Ulcers.

At a late meeting of the Ophthalmological Society of the United Kingdom, Mr. Arnold Lawson read a paper on "Quinine in the Treatment of Corneal Ulcers." He said that up to the present time the use of quinine in ophthalmology had been restricted to a very limited class of conjunctival and corneal affections, but his observations, which had extended over four years, showed that it was a very powerful curative agent in a large variety of corneal ulcers not amenable to ordinary routine treatment, to which much more drastic measures were commonly applied. The sulphate of quinine dissolved carefully in just sufficient sulphuric acid to hold the salt in solution was preferable to either the hydrochloride or the acid sulphate, both of which were soluble in water; and it was recommended to be used in a 1 per cent. solution. The eyes should be soaked in the solution for five minutes four or five times a day, and in addition a thorough irrigation daily by an undine filled with the solution was advised. It caused very little discomfort, and patients used it readily, but stronger solutions gave rise to pain, and had no advantage. When the treatment was going to be successful improvement showed itself within a few days, and if no manifest benefit was effected within a week it might be discontinued. The rapidity of healing under this treatment was at times remarkable, and the author had seen many for-

midable-looking ulcers heal by this treatment alone within a week. A list of several cases of corneal ulceration treated by this method within the last three years was appended to the paper.

Myopia.

At the last meeting of the British Medical Association Ernest Clarke (*British Medical Journal*) gave a summary of his twenty years' treatment of myopia. He advocates the full correction of all cases of myopia and compound myopic astigmatism. His method is to estimate the ametropia under a mydriatic and to order the full correction for all cases. In high degrees the patients sometimes refuse to accept the full correction, but with this exception he never reduced the spherical glass for near work. Out of 532 cases which had been under observation for more than two years the majority showed no increase in the myopia, and in only three instances had the myopia increased as much as 4 D., and in only sixteen had there been any increase worth mentioning. In some it was necessary to stop all near work, but for these full correction was always given. If this principle were carried out generally, he feels sure that progressive myopia and high degrees will become almost unknown.—*Med. Rev. of Reviews.*

Diseases of the Ear.

In the *Therapeutic Gazette* is an excellent abstract of an article by Grant in the *Clinical Journal*, on "Diseases of the Ear." With regard to foreign bodies, the author reminds us not to believe in the presence of a foreign body until we have seen it; do not be guided by a probe, because the most fallacious feelings are produced by a probe in the ear. The author has touched thin masses of cerumen on the floor of the meatus, and they have been so hard that he has been almost convinced there was a sequestrum of bone or a stone of some sort inside the meatus. The mistake made with regard to foreign bodies is trying to take them out with forceps; of all instruments at our disposal for the purpose, a forceps is the most certain to fail. There is, it is true, a very fine pair made with detachable blades, which are introduced one above and one below the foreign body, but they do not often act well. When a foreign body is found in a child, the great thing is to give an anesthetic. Of course, many foreign bodies will come out with syringing, but a great many will not. We must, however, be very careful in trying to remove the foreign body with an instrument, because if we fail to get it out we probably irritate the skin of the external meatus to such an extent that it swells up and makes the subsequent removal infinitely more difficult than it

was before. It is to be kept well in mind that the direction of growth of the skin of the membrane and external meatus is outward toward the meatus; just as the nail grows upward, so this skin grows in that direction (little cicatricial points on the membrana tympani have been seen to gradually work their way up on to the roof of the meatus). This has the effect that sometimes a foreign body in the meatus that we have been unable to move has worked out to the orifice.

At the hospital the author has spent a great deal of time and trouble to extract a foreign body, and has told the mother to bring the child again in a week, ordering her to use some lead-water drops. The mother comes back in a week with the foreign body in her hand. When asked how it got out, the answer has been, "Oh, it was just at the opening, and I got it out with a hairpin." The fact is that there is this tendency to spontaneous extrusion, and if a foreign body is not likely to do harm—for instance, a bead or a little pebble—it is better to leave it alone, or at least not to be in too great a hurry to get it out, and allow the inflammation to subside. If you use an instrument for the removal of a foreign body, it should be a very fine one, and used under an anesthetic. The author employs an instrument like an exaggerated crochet-hook with a very sharp point, and it should be put in an angular handle so that we may know which way the point is projecting. Another instrument which has also a very sharp hook serves for this purpose, and for other purposes as well; it can be coaxed beyond the foreign body, turned round, and the foreign body is gently rolled out by means of it.

The author gives in his paper a little hint which we may find very valuable. We all know the extreme difficulty of examining the interior of the ear of an infant or very young child. We must recollect that in the infant the tympanic membrane is more horizontal than it is in the adult; also that there is no osseous meatus. The rule in examining the ear of a young child is to pull the auricle downward and backward. We all know how anxious we are when a child has the symptoms of meningitis to make out whether these are due to inflammation of the middle ear. We look into the child's ear and see the posterior wall; we may say that it is slightly congested, but we cannot say more than that. We may not realize that instead of pulling the auricle upward and backward, we should pull it downward and backward. We will then be surprised to find how good a view we get of the tympanic membrane—even in a very young infant—if this rule be followed.

Therefore, we can get a much better view of the tympanic membrane in a child or young infant by *pulling the auricle downward and backward*, not upwards and backward.

LARYNGOLOGY AND RHINOLOGY

IN CHARGE OF J. PRICE-BROWN

A Contribution by the Study of Ocular Affections of Nasal Origin.

A. Carbone (*Archiv. Ital. di Otologia, Turin,* June, 1904). From the Polyclinic in Turin the writer has collected a large number of instances in which different affections of the eye were directly traceable to nasal disease. Among these he mentions clonic blepharospasm and blenorrhea due to atrophic rhinitis; ciliary blepharitis, both pustulous and ulcerous, and palpebral phiniosis due to simple chronic rhinitis. Acute rhinitis is often followed by catarrhal conjunctivitis, while in children with impetiginous rhinitis, there is often pustulous conjunctivitis and phlyctenular kerato-conjunctivitis. In many of these cases the presence staphylococcus pyogenes aureus has been demonstrated. In the treatment of these cases, the ocular symptoms abated with improvement in the nasal conditions.

Nasal Disease as a Cause of Headache.

A. L. Whitehead (*Brit. Med. Jour.* January 28th) completes an article upon this important subject by the following conclusions:

1. Nasal disease is undoubtedly the cause of headaches in a certain percentage of cases, although it is doubtful whether it is possible for headache to be produced by any nasal condition which does not give rise to discharge, or to obstruction to normal nasal respiration.

2. In all cases of persistent headache, a careful examination of the nose should be as much a routine practice as the examination of the urine, the teeth, and the eyes; since in some instances the nasal symptoms may be ignored by the patient, and a careful examination of the nose will be necessary to establish the diagnosis.

3. Suppuration in the accessory sinuses, and marked nasal obstruction, constant or intermittent, should be thoroughly treated.

4. Small spurs, deviations, and hypertrophies, not causing obstruction, should be left alone, as no relief will be given from the headaches by treatment of these.

5. If the middle turbinated bones are enlarged and pressing upon the septum, especially upon the tubercle, and if all other possible causes of headache have been eliminated, partial removal of the hypertrophied bone should be advised, since in many such cases complete relief is given.

Nasal Hydrorrhea.

E. J. Rhodes (*Jour. Laryn. Rhin. and Otol.*, March, 1905) gives the history of a case. Two theories have been advanced as to the cause: First, that the disease is a neurosis of the fifth nerve in the nasal mucosa. Second, that it is a symptom of a general neurasthenic condition. Rhodes holds to the latter theory. In treating his case, many remedies were tried, but all failed until he applied nitrate of silver, grs. 60 to the ounce. This caused violent headache, lasting for several days, during which the discharge ceased, and did not return.

The Ultimate Results of Cauterization of the Lower Turbinate, with Therapeutic Suggestions Based Upon Histological Findings.

J. L. Goodall (*Boston Medical and Surgical Journal*, Dec., 1904), gives the details of six cases, with the resulting summary of conclusions:

1. Caustic applications to the nasal mucous membrane may cause a loss of the columnar ciliated epithelium, with a replacement of this by cells of a squamous type.
2. Such applications may cause an obliteration of the canaliculi in the basement membrane.
3. Immediately below the cauterized mucous membrane, new connective tissue may be formed, which extends downwards to a depth dependent upon the intensity of the trauma.
4. The contraction of the tissues, which is observed clinically to follow caustic applications, is due to the contraction of this new-formed connective tissue, and the consequent compression both of the lymph sinuses, and of such cavities as the lumina of blood-vessels and glands.
5. Repeated superficial application of caustics tend to the formation of connective tissue immediately beneath the epithelium, which, by its contraction, may constrict the lumen of the ducts of the glands and lead to cystic dilatation of the latter.

Taking all these phenomena as a guide, the writer concludes that judicious cauterization of the relaxed mucous membrane in vaso-motor rhinitis may sometimes be advisable; but that in the majority of nasal conditions cauterization has an effect the reverse of beneficial.

Nasal Diphtheria.

F. Massei (*Archiv. Ital. de Laryngologie*, Naples, April, 1904), deals in an exhaustive manner with this division of diphtheria, in which he describes the history, symptoms, diagnosis, and treatment. Among many practical points he dwells particularly upon the importance of regarding a large majority

of cases of rhinitis fibrosa as nasal diphtheria, and treating them as such, even when in doubt. Still, he realizes the possibility of the existence of the coccus forms of membraneous rhinitis.

Torticollis Following the Removal of Adenoids.

Ferreri (*Archives Intern. de Laryngologie*, Nov. and Dec., 1904), draws attention to the tendency of the operation to cause irritation in the ears, nose and throat. He quotes two cases. The first, a girl, aged 12 years, suffered from subacute otitis media and the presence of a large adenoid growth. Sudden cold caused the ear to suppurate. The adenoid, under cocaine and adrenalin, was removed at two sittings. After the second operation the girl was seized with shiverings, and temperature of 104° Fahr., with spasmodic twitchings of the neck. Treatment by large doses of aspirin, hot applications, and gargles of salicylic acid removed both the torticollis and the middle ear disease. The second case was that of a boy, aged 8 years, who had adenoids, enlarged tonsils, and intermittent deafness. After operation the temperature ran up, the glands of the neck swelled, and tenderness with rigidity of the neck muscles developed. The condition was relieved in twelve hours by hot fomentations.

The Opening of Peritonsillar Abscesses.

St Clair Thompson (*British Medical Journal*) February 12th, 1898), dwells upon a simple, safe and satisfactory evacuation of Peritonsillar abscess, as opposed to the dissatisfaction of the general profession and of the public with the operation, as usually done. Many medical men in operating upon the throat for evacuation of pus, are in constant dread of opening some important artery or vein. Even Bosworth, in spite of his long experience, says that in no case has he incised a quinsy without a certain degree of nervousness on account of the proximity of blood vessels.

St. Clair gives the following as the natural sequence of events in ordinary cases: Attempts at relieving the pent-up pus are postponed by both patient and practitioner as long as possible, to avoid dreaded pain by the former, and failure in finding pus by the latter. Towards the seventh day, the patient commences to wear out, and the medical attendant, under the belief that "matter has formed," arms himself with a sharp-pointed, narrow-bladed knife. While prepared to operate, he has a vivid mental picture of the proximity of carotid arteries. The view he can obtain of the field is most restricted. If, however, successful in seeing the tonsillar region, he thrusts his narrow blade into the most prominent part, hoping to find pus. If

none appears and the patient is tolerant, one or two or three more stabs may be made; and the patient is encouraged by the winning statement, that "if pus does not then appear, the bleeding will itself be beneficial." Perhaps the abscess is "not ripe." Possibly the following morning the announcement may be made that it "burst in the night."

The writer of the article believes that the uncertainty of relieving quinsy is due to a want of knowledge of its usual location; and that the anxiety in opening the puruleut collection can be entirely avoided, by not using a knife in the operation, but a modification of Lister's sinus forceps.

St. Clair Thompson believes that an acute collection of pus in the faucial region, known as quinsy, never occurs in the tonsil itself It is always peritonsillar and forms in the areolar tissue between the tonsil and the aponeurosis. Most frequently it is met with in the prolongation of the faucial pillars, and in the large majority of cases, is situate above and in front of the tonsil.

Left to itself the peritonsillar abscess usually bursts spontaneously into the mouth, but the silt may escape detection, as it frequently occurs beneath the folds of the supratonsillar fossa, the pus trickling down over or behind the tonsil. Sometimes a quinsy will rupture through the soft palate, and this is the safe and effective route by which the surgeon should endeavor to relieve the patient.

To make the point definite, imagine a horizontal line across the base of the uvula, and a perpendicular line at right angles to it, parallel with the base of the anterior faucial pillar. The point of intersection is directly over the supratonsillar fossa, and is the point to be opened.

The patient's throat is first to be cleansed and sponged with a 5 per cent. solution of cocaine. When required the head should be held by an assistant. General anesthesia should never be used. When ready, the tongue being depressed, the surgeon can usually find the soft, boggy spot, behind which pus has already accumulated; and by direct pressure and rotation of the instrument, the pus-sac is entered. By the sense of touch the surgeon must determine the depth of the opening to be made. In withdrawing, the forceps should be opened to their widest extent, thus ensuring free drainage.

Other methods of operating are referred to by the writer of the paper, such as the use of Killian's blunt probe, and the use of the galvano-cautery knife; but he considers the one he more fully describes as the better plan of treatment.

Epithelioma of Soft Palate, Tonsil, and both Alveoli—Excision, Recovery. Cancer Hospital, Brampton.

Herbert Snow, Senior Surgeon (*British Medical Journal*, Feb. 11th, 1905).

T. W., aged 52 years, a sturdy-looking man, was admitted on Aug. 10th, 1904. A typical epitheliomatous ulcer occupied the left side of soft palate and the internal aspect of the cheek. The alveolar processes of both upper and lower jaws were infiltrated and the tonsil was involved. The tongue appeared free. The glands were not enlarged but excruciating pain was felt.

Operation was decided upon, and was extensive, involving the removal of nearly all the inferior maxilla, a portion of the left superior maxilla, a large section of the soft palate and left tonsil—the latter largely by electro-cautery. There was little hemorrhage. An excellent exposure, and removal of diseased tissues by incisions was accomplished. The wounds were accurately sutured by silkworm-gut and united by first intention. The recovery was a favorable one. The highest temperature was 100° F. on the fifth day. On the eighth day it was subnormal.

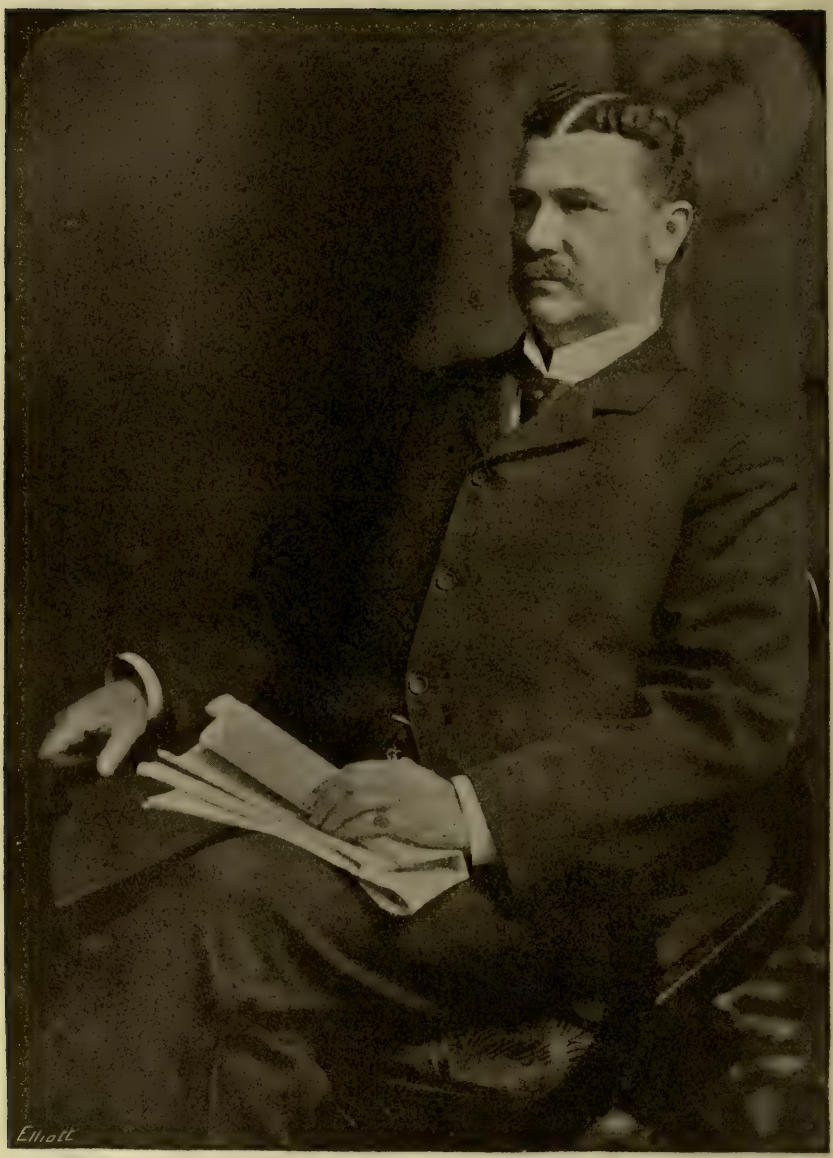
The patient made a good recovery. The wounds cicatrized firmly, and the beard hid from view any outward manifestation of the extensive operation. At the time of reporting he was still perfectly well.

A New Method of Treating Otomycosis Aspergillina.

E. Guarnacia (*Archiv Ital. de Otologia*, Turin, June, 1904,) has successfully treated three cases of Aspergillus Niger by means of instillation of Merk's Oxygenated Water, containing 20 per cent. of oxygen. Ten drops were instilled every two hours. It is of interest to know that two of the patients were employed in a tannery, while the third was a boatman carrying leather. It is well known that leather is an excellent culture medium for aspergillus.

Three Recent Cases of Croup Due to Staphylococcus and Requiring Tracheotomy.

Auzinger (*American Journal of Medical Science*, Nov., 1904). These all occurred in children between the ages of one and four years. All followed attacks of acute tonsilitis, but none of them were accompanied by deposit of false membrane within the pharynx or larynx. Two died a few hours after tracheotomy of profound toxemia; one recovered. In two, diphtheria was diagnosed and antitoxin given with negative results. Swabs from the throat in all the cases gave pure cultures of staphylococcus, which when tried on white mice proved unusually pathogenic.



DR. CHARLES O'REILLY

Editorials.

THE NEEDS OF THE UNIVERSITY OF TORONTO.

No man in Canada has taken a broader view of higher educational matters than Mr. J. P. Whitney, the Premier of Ontario. He surprised the late Government, his own party, and the Province of Ontario, five years ago, when he boldly proposed a more advanced policy in dealing with the needs of the Provincial University. He stated at that time in the House that it was intolerable that the existing conditions at the University should be continued; the Province should either support or abandon the University. It was the duty of the Government to put the institution's finances on a sound, suitable, and permanent footing by giving it an annual revenue which would fairly and fully meet its needs. This was not considered good generalship by some of our politicians. It was really not the act of a politician, but rather that of a statesman. He showed no desire to gain any party advantage, but generously gave his support to the Government. Although Mr. Whitney has been Premier for a short time only, he has already given evidence of his determination to carry out the policy which he before outlined.

In speaking of the University's requirements he gave the following items: A new Physics Building to be erected at a cost of $225,000; of this the late Government had promised $180,000, the proceeds of the sale of the old Parliament grounds, leaving a balance of $45,000 to be provided. A Museum wing to the Science building on College Street will be erected at a cost of $50,000. The new Convocation Hall will cost about $160,000; of this the late Government had promised $50,000, and a similar sum had been raised by subscription. The Government has agreed to the plan proposed by the trustees for securing the remainder; it will be taken out of the Endowment Fund, and be paid from the revenues of the wild lands given to the University. A glass house for practical work in forestry and botany will be erected at a cost of $5,000, and an addition to the Woman's Residence will be built at a cost of $15,000; and as explained on another page of this issue, four residences will

be erected for male students at a cost of $40,000 each. The Government will give $50,000, while the remainder will be made up by private subscriptions.

The total proposed expenditure will be about $1,600,000, and of this sum the direct grants by the Government will amount to about $465,000. The Government have in their possession written promises that if the scheme thus outlined were brought to a successful conclusion, over $250,000 was waiting to be given to the University.

The Premier also stated that when the House next met he would submit a measure providing an annual appropriation to be drawn from the succession duties, or some other branch of the public revenue, for the University's needs. He further explained that during the coming recess the Government would take up and consider the question of the troubles and complaints at the University; it was their intention to either appoint a commission or take some other steps to inform themselves of the exact state of affairs existing, and ascertain the best manner of changing the entire administration of the University.

TORONTO GENERAL HOSPITAL.

We publish in this issue a very important statement issued by the trustees of the Toronto General Hospital. It is hoped that in a comparatively short time there will be erected on some central site in Toronto a new general hospital at a cost of about $1,500,000. It is expected that the Provincial Government, the City of Toronto and the Hospital Trust, will work together. The Premier of Ontario, in discussing the matter in the House, May 17th, said that the last and most important provision of a bill which he was introducing was intended to bring about closer relations between the Medical Faculty of the University of Toronto and the Toronto General Hospital. It was at one time proposed that the Provincial Government and the City of Toronto would each grant $100,000, with the understanding that the Hospital would rebuild on its present site. It is now considered advisable that a new site be secured which would suit the convenience of the Medical Faculty and the students. If this

were done it would mean the expenditure of at least $1,000,000. In this the Government would be asked to give $250,000, and it would also be asked to consent to the borrowing of $50,000 from the Endowment Fund for the purchase of a site. This happy condition of affairs is one of the results of the recent amalgamation of the Trinity and Toronto Medical Faculties A few years have brought great changes.

DR. CHARLES O'REILLY

The profession of Canada were surprised to learn, May 1st, that Dr. O'Reilly had tendered his resignation as Superintendent of the Toronto General Hospital.

He first acquired a reputation as an able and efficient administrator in the General Hospital, Hamilton, where for some years he was the Medical Superintendent. A certain portion of the medical profession did not accept the appointment of Dr. O'Reilly as Medical Superintendent of the Toronto General Hospital with marked approbation. It was soon found, however, that he was the right man in the right place, and his administration of affairs has done much to place the hospital in the position it now occupies. The Toronto General Hospital is now, and has been for many years, the largest institution of the kind in Canada. It has four hundred beds for patients, and altogether a population of five hundred or more at all times.

The following brief references made to the growth of the institution during the last twenty-nine years are somewhat interesting. During this time over 100,000 patients have been treated in the hospital, and over 4,000 births have occurred in the Burnside maternity department. The original hospital has been enlarged in many ways. One of the most important additions to the hospital was the establishment several years ago of an Emergency Branch down town, in which over 2,500 patients are annually treated.

Dr. O'Reilly has been on different occasions Examiner for the Ontario Medical Council, the University of Toronto, and the Trinity University. He has taken an active interest in the Association of Hospital Superintendents of North America, and

has been for the last two years vice-president. We are told that the presidency of the same Association is ready for his acceptance at any time. He is also vice-president of the Ontario Hospitals' Association.

In private life, Dr. O'Reilly's genial manner and kindness of heart have gained for him a great host of friends living in all parts of Canada and the United States, or perhaps, more correctly speaking, in all parts of the civilized world.

His friends in Toronto propose to give him a dinner on the evening of June 19th. Tickets for the same may be obtained from Dr. Sam. Johnson, 169 Carlton Street.

Dr. Charles O'Reilly, Mrs. O'Reilly, and their only son, Dr. Brefney O'Reilly, will sail from Montreal for England June 24th. The best wishes of the profession of Canada will follow them. It is not unlikely that Dr. O'Reilly will remain for some time in England.

BANQUET TO DR. OSLER IN NEW YORK.

There was a remarkable gathering of physicians at the dinner given to Dr. Osler, in New York, May 2nd. The Committee who had charge of the banquet was composed of Doctors Bray, Jacobi, Janeway and Dana. We are told that this tribute to Dr. Osler was initiated by the Committee of the Medical Faculty of the University of Pennsylvania, of which he was one of the professors for about five years.

Dr. Osler's career embraces three periods: (1) Professor in McGill University, Montreal; (2) Professor in University of Pennsylvania, Philadelphia, and (3) Professor in the Johns Hopkins Hospital, Baltimore. The histories of these three periods formed the main subject of the addresses delivered at the banquet. Dr. F. J. Shepherd, of Montreal, spoke of Dr. Osler's work in Canada; Dr. J. C. Wilson, of Philadelphia, gave a sketch of his career in that city; and Dr. Welsh, of Baltimore, referred to the great work he had done at Johns Hopkins University. In addition to these three addresses, Dr. Jacobi, of New York, made reference to Dr. Osler as a literary man, and Dr. Weir Mitchell, of Philadelphia, delivered a short address when presenting to Dr. Osler a copy of "Cicero's de Senectute."

Among those present from Canada were—Drs. Shepherd, Bell, Lafleur, Arthur Brown, Birkett, Adami and Armstrong, of Montreal; Drs. Arch. Malloch, James Russell, Ingersoll Olmsted and J. H. Mullin, of Hamilton; Drs. N. H. Beemer, Allen Baines, Adam Wright and Herbert Bruce, of Toronto; Dr. Hugh A. McCallum, of London.

The *Evening Mail* of New York gives the following list of guests of honor "who have passed the time when they should be attending banquets, unless the menu were strictly limited a la Maryland": Robert Fletcher, 84; Stephen Smith, 82; S. Weir Mitchell, 75; W. M. Polk, 71; D. W. Sternberg, 67; St. John Rosseau, 69; Jno. S. Billings, 67; E. S. Janeway, 64; Francis Delafield, 64; James Tyson, 64; J. R. Chadwick, 61; John A. Wyeth, 60.

The banquet was altogether the most magnificent thing of the sort that this continent has known.

CANADIAN MEDICAL ASSOCIATION.

As we have already announced, the thirty-eighth annual meeting of the Canadian Medical Association will take place this year in Halifax, under the Presidency of Dr. John Stewart of that city, who, along with his Executive Committee, and Programme and Committee of Arrangements, are ardently working for the complete success of this meeting, the first which has been held in Halifax since 1881, when the number present just numbered fifty-three. If an united effort be put forth by the vice-presidents and local secretaries in the different provinces, especially in Nova Scotia, Prince Edward Island, New Brunswick, Quebec and Ontario, there should be a largely attended meeting. There are indications that Montreal and Toronto are both going to send down good contingents. Daily there are additions to the list of contributors, whose names we will publish in a later issue. This year all delegates will travel on the usual *Standard Convention Certificate* plan, which means that every delegate when purchasing single first-class fare to Halifax, must get from the ticket agent a Standard Convention Certificate for himself, his wife or daughters if they accompany him. Delegates will kindly bear in mind that

they do not have to get any special certificate from the General Secretary. If fifty are present holding Standard Convention Certificates, all will be returned free to Montreal. Montrealers will, as well as delegates from Quebec, be returned for single fare. If there are 300 present holding these Standard Convention Certificates, all will be returned free to their original starting point. This applies to all parts of Ontario, Manitoba, the Northwest Territories and British Columbia. Delegates from points west of Port Arthur will not be allowed to use the upper lake routes when travelling by this certificate plan, in either direction. In all cases return transportation *must* be arranged for at Halifax. The usual time limit for conventions will be allowed for points east of Port Arthur, namely, three days before and three days after the meeting. Our readers will kindly extend this information as much as possible, and those who intend contributing papers and being present, are requested to notify the General Secretary, Dr. George Elliott, 203 Beverley Street, Toronto, without delay. No arrangements can be secured for return via Boston or New York after the meeting; and those desiring to be routed thus should ask for tourists' tickets. Arrangements are in progress for completion about the end of May for boat trip, *Toronto* or *Kingston*, to Montreal or Quebec via the Richelieu and Ontario Navigation Company's line.

The Ontario Medical Association will begin its Twenty-fifth Annual Meeting on the morning of Tuesday, June 6th, under the presidency of Dr. Wm. Burt, of Paris.

A programme full of papers has been secured through the efforts of the energetic Committee on Papers.

The Committee on Arrangements will provide for a few hours of entertainment. This will take the form of a tea at the Ontario Medical Library on Tuesday afternoon, at which the men from outside the city will be able to see the newly acquired home of the Library, and have an opportunity for a social hour together. On Wednesday evening an informal gathering will be held in the Biological Buildings, at which entertainment of a scientific and social character will be provided.

The fact that the Post-graduate Course of the Medical Faculty, and the meeting of the Executive Health Officers of the Province immediately precede these sessions, should ensure a large attendance.

GRADUATES OF THE UNIVERSITY IN THE ONTARIO GOVERNMENT.

It is a remarkable fact that of the ten members who form the present Executive Council of the Province of Ontario, all but three are graduates of the University of Toronto as it is now constituted.

The Premier and Attorney-General, the Hon. J. P. Whitney, K.C., is entered in the roll as "LL.D., 1902." He is an old pupil of the venerable Cornwall Grammar School, and was called to the Bar in 1876. Since the year 1888 he has continued to represent the County of Dundas in the Ontario House of Assembly; and he has been the leader of the Conservative party since April, 1896.

The Hon. J. J. Foy, K.C., Commissioner of Crown Lands, was made an LL.D. on the same day, in 1902, as Mr. Whitney. He studied at St. Michael's College and at Ushaw College, England, was called to the Bar in 1871, and was elected a Bencher of the Law Society in 1881. He has been a member of the Ontario House since 1898.

The Hon. J. O. Réaume, M.D., C.M., Commissioner of Public Works, is a graduate of Trinity of the year 1886. His early education was received at Assumption College, Sandwich. He was first elected to the Ontario House in 1902, as member for North Essex.

The Hon. A. J. Matheson, Provincial Treasurer, is an old pupil of Upper Canada College, and a graduate of Trinity, where he became a B.A. in 1865. He is now a member of the Council of Trinity College. He was called to the Bar in 1870. It was in 1894 that he was first elected by the constituency of South Lanark, which he has continued to represent ever since.

The Hon. S. N. Monteith, Minister of Agriculture, is a graduate of the Ontario Agricultural College, where he received the degree of B.S.A. in 1890. He is not only a graduate, but a very practical agriculturist.

The Hon. R. A. Pyne, M.D., Minister of Education, is a graduate in Medicine, first as M.B. in 1878, and then as M.D. in 1880. He has been prominently associated with the School Board and the Public Library, of Toronto, and was also Registrar of the Ontario Medical Council.

The Hon. W. A. Willoughby, M.D., Minister without portfolio, is a graduate in Medicine, of Victoria, of the year 1867, his previous preparation being received at the Bradford Grammar School. He first entered the House as member for East Northumberland in 1886. Dr. Willoughby has occupied many important posts in various municipal capacities in Colborne, his place of residence.—*Univ. Tor. Monthly.*

TORONTO GENERAL HOSPITAL.

The Board of the Toronto General Hospital has issued the following statement.

The action of the Government in authorizing an advance of $250,000 by the University of Toronto to the proposed reorganization plan of the Toronto General Hospital, and the advance of a further $50,000 out of the University endowment toward the purchase price of a suitable site for the Hospital, makes the present a natural time for the trustees of the Toronto General Hospital to make known to the public the character of the negotiations which have been in progress for many months.

Recognizing that the present premises were unequal to the requirements of a modern hospital, and that new buildings and equipment were highly desirable, they approached the University authorities, the Government of the Province, and the Board of Control of the city, asking if there was not some basis for a fusion of interests that would work out to the common benefit of the city and the University, and meet the responsibility of the Government for the provision of adequate medical education for the University of Toronto School of Medicine. It was felt that if it were possible to secure such co-operation, it would be proper for the present Board of Trustees of the Toronto General Hospital to tender to the Government the trust under which the property and endownent is held at present, and to have a new trust formed which would recognize the interests of all the contracting parties named above.

The response on the part of the Government and the University has been the setting aside of the above two sums aggregating $300,000. It is hoped that the response on the part of the City Council will be $200,000, and that the individual citizens will contribute, say, $800,000.

With this sum a central site will be secured, and a general hospital, an emergency hospital, and an out-patient hospital will be built upon it. The public wards will be available for the medical faculty of Toronto University for educational purposes, and for the moderate expenditure of $300,000 the province will have secured for its provincial medical school all the necessary advantages which they would secure in a direct ownership of a hospital establishment costing $1,300,000 in land, buildings and equipment, and a yearly income of $25,000. The city will enjoy the advantage of a modern, well-equipped hospital capable of performing to the highest degree of efficiency the service necessary for the comfort of the sick and suffering.

It would not have been possible for any one of the co-operating bodies to have alone acquired a site and buildings of the

type at present proposed, and the fusion of interests which has taken place seems to provide the needed facilities for all with a fair distribution of the burden.

J. W. FLAVELLE, *Chairman.* PETER C. LARKIN.
THOS. URQUHART. CAWTHRA MULOCK.
M. J. HANEY.

ITEMS.

Post-Graduate Course of the University of Toronto.

The Post-Graduate Course of the Toronto University began on Monday, May 22nd, and will terminate on Monday, June 5th. The programme included the following: Operations and surgical clinics in the various Toronto hospitals; clinical methods and practice in the University of Toronto; a course in surgical pathology, including gross and microscopical specimens in the laboratories of the University of Toronto; medical clinics in the various hospitals; and a course of surgery on the cadaver.

McGill University.

The tenth course of instruction for post-graduate students, given by the Faculty of Medicine of McGill University, will begin June 5th and terminate June 30th. The principle adopted for this session is to make each course optional, attaching thereto a special fee. The programme, speaking broadly, includes general clinics and special courses in different subjects.

Residences for the University of Toronto.

We have before referred to the fact that Mr. Whitney, of Ottawa, has presented to the University of Toronto the sum of $45,000, to be used for the construction of a residence for the students of the University, on the condition that three other buildings of the same sort be erected.

It was recently decided at a meeting of the University Senate, to erect four such buildings in the near future. The work has been placed in the hands of a Board of Trustees, composed of Mr. E. C. Whitney, Mr. S. H. Blake, Mr. Z. A. Lash, Mr. J. W. Flavelle, Mr. T. R. White, Sir Wm. Meredith, the Chancellor, and Prof. Loudon, President of the University.

A deputation composed of Dr. Barrick, Dr. Rosebrough, and Professor Wrong, waited on Premier Whitney, May 17th, and asked for a grant towards establishing a Home for Inebriates. Consideration of the matter was promised, but it is not expected that any large sum for such purposes will be forthcoming before the next session of Parliament.

Personals.

Dr. Osler, Mrs. Osler, and Master Osler sailed from New York on the S.S. *Cedric*, May 18th.

Sir James Grant sailed from Montreal on the *Virginian*, May 26th.

Dr. J. T. Duncan left Toronto May 25th, for a three months' tour in England.

Dr. J. S. McEachern, Trinity, '97, of Elmvale, who was for some time engaged at Post-graduate work in London, England, returned to Canada early in May.

Dr. Edmund E. King reached London, England, May 14th. He expects to return to Toronto about July 1st.

Dr. G. Sterling Ryerson left Toronto for England May 25th.

Dr. John McCrae, of Montreal, paid a short visit to Toronto early in May.

The marriage of Dr. T. H. Bell, of Winnipeg, to Miss Darling, of Toronto, was announced for June 1st.

The admirers of Dr. Addis Emmett, New York, gave him a dinner, May 29th, in celebration of his 77th birthday.

In our last issue we referred to the fact that Dr. Bray had been honored by his *Alma Mater*, Queen's University, conferring upon him the honorary degree of LL.D.

The Chatham *Daily News*, in commenting on this, makes reference to Dr. Bray's long service in municipal affairs in that city. It mentions the fact that he had served the city in municipal affairs for nearly thirty years. He was elected school trustee in January, 1869, running against the late Edward Robinson, ex-M.P.P. He was chairman of the Board in 1874, and in 1875 he retired and ran for Councillor for Ebert's Ward, and was elected, and remained a Councillor until 1878. He was elected Deputy Reeve in 1877, having as his opponent the late John Smith, ex-M.P.P. He retired from the Council in 1878, and was appointed a trustee for the High School, and sat at that Board for about ten years. When Chatham became a city in 1895, Dr. Bray was elected Alderman in that and the following year. He retired from the Council in 1897, and was elected Water Commissioner, with Mr. Shelden, in 1899; was re-elected every year up to the present time, and has been chairman of the Board for seven years.

When considering the fact that Dr. Bray has had a large and laborious practice for more than thirty years, has been a member of the Medical Council for twenty-five years, and has also taken a great interest in many medical associations, we commence to realize the fact that he is what may be called a many-sided man.

Obituary.

JAMES THORBURN, M.D.

We have to announce with the deepest regret the death of Dr. James Thorburn, which occurred at his late residence in Toronto, May 26th. He was born in Queenston, November 21st, 1830. He received part of his medical education in Toronto, but completed his course in the University of Edinburgh, graduating M.D. in 1855. He received the degree of M.D. *(ad eundem)* from the University of Toronto in 1859.

Shortly after leaving Edinburgh he settled in Toronto and very soon acquired a large and lucrative practice. His handsome appearance, charming manner, kindness of heart, boundless tact and great skill made him one of the best specimens of a *family physician* that this country has known. He was, however, essentially a general practitioner and was for many years recognized in Toronto as a man skilled in medicine, surgery and midwifery.

Although as a practising physician he was ever busy, he did much outside of his routine work. He was for some time a teacher of Medical Jurisprudence, and later of Therapeutics and Materia Medica in the Toronto School of Medicine, and also a teacher of Clinical Medicine and Surgery in the Toronto General Hospital. He gave up his work as an active teacher in 1888, and was appointed Emeritus Professor of Therapeutics and Materia Medica in the University of Toronto, and shortly afterwards Consulting Surgeon to the General Hospital. He took much interest in the welfare of the University of Toronto and was for many years a member of the Senate of that institution.

He was a very active supporter of many medical societies and especially of the Canadian Medical Association, of which he was President in 1895, when one of Montreal's best meetings was held. He was a member of the Ontario Medical Council for many years, and was elected President of that body in 1897. He also took great interest in life assurance and was for a long time Medical Director and Vice-President of the North American Life Assurance Company. While occupying this position he wrote a valuable "Manual of Life Assurance Examinations." He was one of the first surgeons in Toronto to take part in military organization and was for many years surgeon to the Queen's Own Rifles, being with the regiment in that capacity at the Battle of Ridgeway in 1866.

While we, who enjoyed the privilege of a close acquaintance with him were proud of his success in so many directions, we took more pleasure in thinking of his admirable qualities in private life. He was in all respects one of the most lovable men that we have known. While our deepest sympathy is

extended to the family who have suffered a sad bereavement, we are stricken at the same time with grief over the loss of a dear, kind and considerate friend.

FRANCIS WAYLAND CAMPBELL.

Dr. F. Wayland Campbell, Dean of the Medical Faculty of Bishop's College, Montreal, died May 5th, after an illness extending over several months, aged 67. Dr. Campbell was one of the best known practitioners in Montreal, and was for many years editor of the *Medical Record.* Within a year he had lost his two sons, Dr. Rollo Campell and Mr. F. W. Campbell, jr., the latter of whom died only a short time ago. A widow and one daughter survive.

JOHN HERALD, M.D.

In our last issue we published a short obituary notice of the late Dr. Herald, of Kingston. In that notice we stated that "he never rallied after the operation." That statement was incorrect. On the evening of the operation his temperature was 99° and pulse 90. The morning after, his temperature was 99° and his pulse 80. He had a comfortable night, was feeling very well, and was in good condition; there was no nausea or vomiting, and it was supposed that he had completely recovered from the operation. His friend, Dr. Anglin, of Kingston, thought that his condition was in every respect satisfactory, and was convinced that the recovery would ensue. On the evening of the second day, at half-past five, he suddenly became cyanosed with respirations 50 and pulse 150, and died the following morning at fifteen minutes to ten, within 48 hours after operation. The *post-mortem* examination showed that pulmonary thrombosis was the cause of death.

ALBERT EDWARD HARVEY, M.D.

Dr. A. E. Harvey, of Wyoming, one of the oldest and best known medical practitioners of the County of Lambton, died suddenly, May 28th. He received his medical education in Kingston and graduated M.D., Queen's University, in 1869.

ARTHUR RICHARD BOYLE, M.D.

Dr. A. R. Boyle, of 172 Dovercourt Road, Toronto, died in Grace Hospital, May 27th, aged 71. He was graduated from Queen's University in 1859.

Book Reviews.

A Text-Book of Medical Chemistry and Toxicology. By JAMES W. HOLLAND, M.D., Professor of Medical Chemistry and Toxicology, and Dean, Jefferson Medical College, Philadelphia. Octavo volume of 600 pages, fully illustrated, including 8 plates in colors. Cloth, $3.00 net. Philadelphia and London: W. B. SAUNDERS & Co., 1905. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

Dr. Holland possesses the faculty of making even the most difficult and complicated chemical theories and formula easy and clear. This is probably due to his thirty-five years of practical experience in teaching chemistry and medicine. Recognizing that to understand physiologic chemistry students must first be informed upon points not referred to in most medical text-books, the author has included in his work the latest views of equilibrium of equations, mass-action, cryoscopy, osmotic pressure, dissociation of salts into ions, the effects of ionization upon electric conductivity, and the relationship between purin bodies, uric acid, and urea. Chemical substances he has treated from the standpoint of the medical student and physician, giving much more space to toxicology than is given in any other text-book on chemistry. The chapters on the clinical chemistry of milk, gastric contents, and the urine, and that on water supply and filtration are full of practical information. Dr. Holland's work will undoubtedly be gladly received by the profession, presenting as it does the mature experience of a practical teacher.

The Veriform Appendix and Its Diseases. By HOWARD A. KELLY, A.B., M.D., Professor of Gynecology in The Johns Hopkins University, and ELIZABETH HURDON, M.D., Assistant in Gynecology in The Johns Hopkins University. Octavo, 827 pages, with 399 original illustrations, some in colors, and three lithographic plates. Cloth, $10; half morocco, $11 net. Philadelphia: W. B. Saunders & Co., 1905. Toronto Agents: J. A. Carveth & Co., 434 Yonge Street.

It is a very difficult matter to give anything like a suitable review or even a notice of a work like this. Fortunately the world knows Dr. Kelly and recognizes his ability as a writer and teacher. It has been recognized for many years that his great work of "Operative Gynecology" was the best thing of the sort that the world has seen. One of the chief features of that book was the magnificence of the illustrations. He was particularly fortunate in having for some years the services of great artists in this particular line of work. The author gives us interesting information relative to the illustration of medical works and the proper use of good figures. He tells us that the changes in the appearance of an organ brought about by disease are often manifest in such delicate deviations from the

normal topography, that it requires the hand and eye of a genuine artist, and one who is also a well-informed anatomist and pathologist to represent the morbid condition accurately. The sense of vision unaided often fails to grasp the significance with completeness, and in such a case the true artist will palpate the fresh specimen and then represent the combined illustrations of sight and touch. The artists demonstrates the character of the specimen (1) by inserting lines; (2) by cutting away portions of the surface and thus displaying the depth; (3) by magnifying the organ and drawing it as though translucent; (4) by explanatory diagrams and cross-sections.

The writer of this review is rather a poor artist, but he holds a strong opinion that the illustrations in this book are the best that even Dr. Kelly has produced.

Dr. Kelly quotes the following from Dr. M. H. Richardson: "I am fully convinced that appendicitis is the most important acute abdominal disease of the present time, and that, excluding certain zymotic diseases, it is the cause of more deaths than any other acute abdominal lesion."

We accept this statement as true, and consider, therefore, that appendicitis should be studied most carefully by the physician, the surgeon, and the obstetrician, including both the specialist and the general practitioner.

It is, perhaps, needless to say in connection with this book, that the text is equal to the illustrations, particularly those portions which deal with the clinical side of the subject. We think, therefore, that every physician should obtain the book.

Gall-Stones and Their Surgical Treatment. By G. A. Moynihan, M.S. (Lond.), F.R.C.S. (Leeds). Fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Canadian Agents: J. A. Carveth & Co., 434 Yonge Street, Toronto.

We are told by some recent visitors to Great Britain, that Dr. Moynihan, of Leeds, is the most skillful operator in England, and he happens to be as good a writer and teacher as he is an operator. This book is a very interesting and useful one, containing as it does the material upon which the author based a course of lectures delivered at the Medical Graduates College, in London, during April and May, 1904. It contains an account of the etiology, pathology, clinical manifestations and operative treatment of gall-stones. The chief feature as to the increasing importance of this subject, is the almost certain fact that in the future, as the author states, surgical treatment will be adopted more frequent, and in an earlier stage of gall-stone disease than has heretofore been customary. The book is an excellent one in all respects, and is published in the Saunders' best style.

Practical Pediatrics: A Manual of the Medical and Surgical Diseases of Infancy and Childhood. By DR. E. GRAETZER, Germany, Editor of *Centralblatt Fur Kenderheilkunde*, with numerous additions and notes by the translator, HERMAN B. SHEFFIELD, M.D., Pediatrist of New York. 544 pages. In limp cloth, price, $3.00. Published by the F. A. Davis Co., Philadelphia.

This is a reference book in pediatrics. Part I., containing 19 chapters, is devoted to descriptions of pathological states, diagnosis, symptomatology and treatment. Part II., containing 75 pages, is devoted to materia medica and therapeutics, the majority of the newer remedies being dealt with. Keeping in view the purpose of the book, *i.e.*, for reference, the author has endeavored briefly, but clearly, to present everything worthy of attention from a modern standpoint. The author largely follows Henoch, but the work is chiefly the outcome of his own experience in many years of extensive practice, especially in pediatrics.

"To my knowledge," says the translator, "no book in pediatrics presents in so small a space such an abundance of practical and clinical material, pathological and bacteriological data." The translator has added to the text Lorenz's operation for congenital dislocation of the hip, hydrotherapy, palatable prescribing, and many other articles. The book is well got up—good paper and good type. Altogether a very useful addition to any medical library.

Progressive Medicine—March, 1905. A quarterly digest of advances, improvements and discoveries in the medical and surgical sciences. Edited by H. A. HARE and H. R. M. SANDIS. Lea Bros. & Co. $6 per annum.

The first volume of this year is equal to any of its predecessors. The subjects dealt with are: Surgery of head, neck and thorax, infectious diseases, including acute rheumatism, cropous pneumonia and influenza, the diseases of children, laryngology, rhinology and otology.

Diseases of the Blood (Anemia, Chlorosis, Leukemia, Pseudoleukemia). By DR. P. EHRLICH, of Frankfort-on-the-Main; DR. A. LAZARUS, of Charlottenburg; DR. K. VON NOORDEN, of Frankfort-on-the-Main; and DR. FELIX PINKUS, of Berlin. Entire volume edited, with editions, by ALFRED STENGEL, M.D., Professor of Clinical Medicine, University of Pennsylvania. Octavo volume of 714 pages, fully illustrated. Cloth, $5.00 net; half morocco, $6.00 net. Philadelphia and London: W. B. Saunders & Co., 1905. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

This volume on Diseases of the Blood is the ninth in Nothnagel's Practice to be published in English. It includes anemia, chlorosis, leukemia, chloroma, pseudoleukemia, and each condition is treated so exhaustively and the theories discussed so carefully that the work will remain the last word on the several subjects for many years. Dr. Alfred Stengel, under whose

excellent supervision the entire series is being issued, is also the individual editor of this volume. His wide experience and recognized ability as a clinician, and his valuable work concerning the histology, both normal and pathologic, of the blood, renders this volume of unusual interest. His additions are particularly frequent in the article on anemia. When this series are completed—and the publishers assure us that the three remaining volumes will shortly appear—it will undoubtedly form the best practice of medicine in existence, expressing the opinions of the highest German and English speaking authorities.

A Text-Book of Obstetrics. By ADAM H. WRIGHT, Professor of Obstetrics in the University of Toronto; Obstetrician and Gynecologist to the General Hospital, Toronto, Canada. New York and London: D. Appleton & Co., Publishers. George R. Morang & Co., Canada. Price, $4.50.

For more than twenty years Professor Wright has held a leading place amongst the obstetricians of this continent. Many practitioners in Canada and the United States still depend for their obstetric information on the notes they took of his lectures in their student days. When, therefore, it became known that he was to publish a text-book, its advent was awaited with keen interest and great expectation. The book now before the public clearly shows that Professor Wright's reputation has been well earned.

The style in which the work has been cast—that of lectures—is, we think, the best. It is sufficiently flexible to admit of orderly arrangement, and yet to avoid that pedantry which comes of over classification. No space is wasted on "speculations which lead to no important result," but that which has commended itself to the author's mature judgment, is laid down with admirable clearness and detail.

The work is obviously based on the author's large obstetrical experience, but he has, at the same time, been quick to avail himself of all that is best in the literature of the subject. He has not permitted himself to walk in the beaten track that runs through so many obstetrical text-books, but in no case has he departed from generally accepted teaching, or advanced new ideas, without giving good reasons.

The sections on the "Toxemia of Pregnancy," "Bright's Disease in Pregnancy," and "Eclampsia," and their inter-relationship, form a most valuable addition to the history of a difficult subject. Dr. Dwyer, who has paid especial attention to renal pathology, says of this part of the work: "I critically examined that portion of the work dealing with the difficult and important subject of 'Eclampsia.' The clear and concise setting forth of the known causation and pathology of this condition, as also its relationship with the various forms of

nephritis and albumenuria, is in every respect accurate and complete." The objects of treatment are elimination of the poisons and control of the convulsions, and the various means of accomplishing these objects are carefully reviewed. A good instance of the clinical nature of this work is the chapter on "Dry Labor." The absence or early escape of the liquor amnii will often so modify the course of labor as to become a factor of greater importance even than the presentation or position. We therefore think that the author has done well to treat this condition as a separate entity.

Intercurrent diseases of pregnancy are more fully described than in any other text-book. The sections on heart disease and tuberculosis will be found of especial value. The author's views on the former subject were published two years ago, and have been widely quoted since. Of these two sections Dr. W. P. Caven says: "What strikes me most forcibly about them is that the reader of these articles will have clinical facts at hand which he could only acquire by careful investigation at the end of twenty-five or thirty years' practice. I should consider that every practical point arising in the management of such cases in general practice is dealt with in a most common-sense manner."

Puerperal septicemia is, perhaps, the most difficult part of obstetrics to write on. If any man doubt this let him try. In spite of all that has been written or done, no bacteriological classification has yet been made that will answer clinically. Streptococci may prove comparatively harmless, and saprophytes may prove fatal. Professor Wright has given us a clinical classification which will prove of great service to the practitioner, and the types which he describes will be recognized by all who have much to do with this dreaded infection.

We have heard many practitioners declare that occipito-posterior labors gave them more trouble than all the other complications of labor put together. As this has been our own experience, we have often been surprised to find the small amount of attention given to this subject by obstetric writers. In Professor Wright's treatment of this topic we again see the clinician's hand.

Contrary to many writers the author thinks that the collapse which occurs in concealed accidental hemorrhage is out of all proportion to the amount of blood usually lost. The reader will find some interesting cases cited in support of his views.

With regard to the more purely surgical complications, Dr. H. A. Bruce says: "I was particularly pleased with the chapter on Ectopic Gestation. It gives one, in the shortest space possible, a most lucid and comprehensive account of this difficult and important subject. No one could possibly read this

chapter without feeling that he had acquired a most useful and practical knowledge of the subject. I consider this chapter the best work on Ectopic Gestation that has ever been published. . . . The chapter on Appendicitis gives one a complete account of this subject in a very short space."

The science is not so elaborately dealt with as the art of Obstetrics, but all that is needful is given, and all that is given is correct.

We have singled out a few sections for especial remark, but the work is of the same quality throughout, equal care being evident in each section. On the whole, we consider it by far the best practical text-book on the subject extant. Dr. Helen McMurchy says of it, "Although I have the standard English and American authorities on the subject, I do not think that any of them is so practical, or, perhaps, so forcible. The man and his experience speak directly to one as one reads it, and the style is interesting."

Of the illustrations about 70 per cent. are new, the material being largely photographs of specimens in the University of Toronto and of scenes at the Burnside Lying-in-Hospital. The excellence which has been attained in this part of the work is chiefly due to the untiring efforts of Dr. Edmund E. King, Past President of the Toronto Camera Club, and that gentleman is to be congratulated on the results achieved. We believe that many of these plates have never been equalled. Dr. Walker's drawings, illustrating repair of the perineum, distended bladder, etc., are also especially good.

The work of the publishers has been well done. Paper, type, and binding are all excellent. We have heard expert opinion to the effect that the price charged is a very moderate one for such a production.

Great care has been taken in the preparation of the index, so that reference is easily made to any subject. The list of illustrations has also been arranged alphabetically. As members of the medical profession we feel proud that Canada has made so substantial an addition to the world's medical literature. Truly our University has been a long time in labor, but she has at last brought forth a book. K. C. M.

A new Journal will be published in Chicago, entitled *Surgery, Gynecology and Obstetrics*. The Managing Editor will be Dr. Franklin H. Martin; Associate Editor, D. Allen Canavel. The following well-known men will be associated with Dr. Martin on the editorial staff: Doctors Senn, Murphy, Webster, Holmes, Dudley, Bacon, Besley, Hollister, Bachellé and Cubbins. There will also be a number of collaborators from various cities in the United States.

The first issue will appear about July 1st. The Journal will cover the fields of general Surgery, Gynecology and Obstetrics. The editors will endeavor to make it the most complete, the most important and the best Journal of its kind in the world."

The following papers will appear in early numbers of the new Journal:

"Iodine as an Antiseptic," by Dr. Senn, Chicago.

"Appendicitis Complicating Pregnancy," by Dr. Coe, New York.

"Vaginal Cæsarean Seetion," by Dr. Fry, Washington.

"Thyroid Cysts," by Dr. Bloodgood, Baltimore.

"Short Incisions in Certain Common Operations," by Dr. Van Hook, Chicago.

"Sudden Deaths Immediately Following Parturition and Gynecological Operations," by Dr. Davis, Philadelphia.

"Pelvic Infections," by Dr. Watkins, Chicago.

"Appendicitis in Relation to Pelvic Diseases of Women and Pregnancy," by Dr. Webster, Chicago.

"Eclampsia," by Dr. Kirkley, Toledo.

"Post-operative Vomiting," by Dr. Boise, Grand Rapids, Mich.

"Preparatory and After-treatment of Surgical Cases," by Dr. Ries, Chicago.

Mechanical Vibration and its Therapeutic Application. By M. L. H. Arnold Snow, M.D., Professor of Mechanical Vibration Therapy in the New York School of Physical Therapeutics; Associate Editor of the *Journal of Advanced Therapeutics*; Late Assistant in Electro-Therapeutics and Diseases of the Nervous System in the New York Post-Graduate Medical School, etc. Published by the Scientific Authors' Publishing Co., 465 Lexington Ave., New York. Price $2.50 net.

Mechanical vibrations are of great use in a large number of pathological conditions. We have had great results in joint stiffness (the result of injury) in nervous condition and the neurasthenia. This volume is one that places the use of vibratory machines before the reader in a very clear and interesting manner. Vibration is not a cure-all, but it is an adjunct to treatment that is not widely enough known.

Morrow on Social Diseases. The Relation of Social Diseases and Marriage. By Prince A. Morrow, A.M., M.D., Emeritus Professor of Genito-Urinary Diseases in the University and Bellevue Hospital Medical College; Surgeon to the City Hospital; Consulting Dermatologist to St. Vincent's Hospital, etc., New York. In one octavo volume of 390 pages. Cloth, $3.00 net. New York and Philadelphia: Lea Brothers & Co., Publishers. 1904.

Since unlawful relations between the sexes have come to be known generally as "The Social Evil," the author has adopted the term "Social Diseases" to indicate the infections most usually thus acquired. Their frequent infliction upon innocent

victims through legitimate martial relations involves consequences which affect not only the health, but the peace, honor and happiness of the entire family, and the importance of venereal prophylaxis is beyond words.

The importance and practical value of this new and timely volume, written by a man of profound learning, long experience and sound common-sense, upon a subject which so vitally concerns mankind individually and collectivelly, ensures its wide recognition.

Venereal diseases in their origin, and especially in their far-reaching pathological effects, strike at the very root of race perpetuation. They blight the mental, moral and physical welfare of society as does no other agency. War, pestilence and famine are temporary; venereal diseases constantly ravage all grades of society.

Heretofore no comprehensive treatise upon the subject has existed in our language, and it is fortunate for the profession and laity alike that an author of Dr. Morrow's achievements and established ability is the first to enter the field.

The work sets forth clearly the dangers introduced by venereal diseases into marriage—dangers to the wife, dangers to the offspring, and dangers which come from their morbid irradiations in family and social life. The fulfilment of the protective duty, which has for its object the preservation of the helpless and innocent from infection, realizes the highest ideals of preventive medicine; and, while this duty devolves especially upon the physician, every member of the community is and should be the protector of the wife and mother, and the preserver of the health and welfare of future generations.

Not the least interesting chapter presents the author's views upon the "Medical Secret" and the exercises of professional discretion in restraining improper marriages, and gives valuable hints for the physician's guidance in many of the involved questions which so frequently arise.

In dealing with these situations there is required not only a thorough knowledge of these diseases in all their recently revealed relations, but also a knowledge of human nature, and a professional sagacity which is not taught in the curricula of the medical schools.

It is to furnish just this knowledge that this book has been written, and its perusal, in fact, its study, may well be recommended, not only to every physician, but to every thoughtful adult.

Dr. J. A. Y. Schooley has been appointed Associate Coroner for the County of Welland, and Dr. Hugh Clayton Maclean has been appointed Associate Coroner for the District of Parry Sound.

The Canadian Practitioner and Review.

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Original Communications.

THE MEDICAL TREATMENT OF EXOPHTHALMIC GOITRE.

By R. D. RUDOLF, M.D., (EDIN.), M.R.C.P.,
Associate Professor of Medicine in the University of Toronto.

Perhaps it would be better to call this communication "Notes on the Non-Surgical Treatment of Graves' Disease." The reason for this distinction is the fact, which dawns the brighter the more one sees and studies the course of these cases, that many (some say the majority) of them tend to improve and even recover completely under the most varied forms of treatment. It might even be correct to say that the disease tends to recovery in spite of some treatments!

An immense variety of treatments have been tried and advocated in this condition, each one in its turn to be followed by a list of cures, and then of others, which have not so improved. It is often said that whenever one finds a great number of treatments recommended for any disease, one may conclude that none of them are very satisfactory. This is very true, yet it by no means follows that that disease is therefore hopeless, or unlikely to be recovered from. What disease calls for a greater variety of treatments than a cold in the head? and yet the prognosis is good, and we all recover from it under the influence of, or in spite of, the treatment of almost every friend we meet.

The first point, then, that I would advance is that there exists in Graves' Disease a strong natural tendency towards recovery. Hence, in order to give full credit to that most

*Read at Meeting of Ontario Medical Association, Toronto, June, 1905.

powerful ally of ours, the *vis medicatrix naturae,* emphasis is here laid on this natural drift of the condition towards cure. Dr. Norris (Hare's "System of Practical Therapeutics," Vol. 2., p. 850) puts this idea in other words, when he says that "a placebo often gives good results, and many good results from various drugs, no doubt, are thus explained."

Bristowe states that the disease is not usually dangerous to life and that when death occurs it is usually due to some intercurrent affection. Fagge states also that most cases eventually recover, and that he knew of few deaths. G. R. Murray (*Lancet,* Dec. 13th, 1902) found that out of 40 consecutive cases of his own, 31 progressed favorably and 7 died. W. M. Ord and Hector Mackenzie (C. Allbutt's "System of Medicine," Vol. 4, p. 502) came to the conclusion that about 25 per cent. of all well-marked cases ended in death; that about 50 per cent. attain more or less complete recovery; and that the balance of 25 per cent. remain in *statu quo* or only slightly improve.

The general opinion, then, as judged from literature, is that few cases die directly from the disease, but that many do so from intercurrent affections, and that, while the cases are hard to keep track of, about 50 per cent., more or less, recover eventually.

The essential nature of the disease is uncertain, but the favorite theory is that most of the symptoms are due to an excess of thyroid secretion circulating in the blood; in other words, the patient is suffering from thyroid poisoning, and is, in fact, in a condition the very opposite of myxœdema. She is intensely nervous and emotional, and the least physical, mental or emotional excitement sends her already fast pulse up and produces flushing and perspiration. It is most essential that such a case should be put at rest; perhaps not in bed, although this is often the best at first. She should be kept mentally, physically and emotionally quiet.

The state of the general health should be raised as high as possible, and anæmia, constipation, and any other abnormal condition should be carefully attended to.

The diet should be plain and good, and all stimulants had better be omitted, including tea and coffee.

Beyond these general methods of raising the tone of the patients, our endeavors may be classed under two headings:

1. To prevent the excessive production of thyroid secretion; or to neutralize the poisonous amount of it that is circulating in the blood.

2. To treat the symptoms as they arise.

In the first class come operative measures on the thyroid gland, such as removal of part of the over-functionating organ. Less radical measures than operative ones have for long been in vogue, with the object of checking the over-activity of the gland, among which may be mentioned pressure over the organ and the application of cold, either in the form of ice or by means of Leiter's tubes. The employment of electricity, either as Galvanic or Faradic current, probably may be classed here.

There is no certain way of neutralizing the excessive thyroid secretion in the blood. Possibly the use of thymus gland extract might be mentioned as one, as this material has in many ways the opposite action to the thyroid secretion, but the results of its use have not been encouraging. The administration of thyroid gland was suggested some years ago by Professor Jones. Theoretically it seemed quite wrong to give more of what was already in excess in the blood—much like giving alcohol to cure drunkenness—and yet good results occasionally followed, although oftener the reverse. Later, Professor Jones found that what he had really been using was the thymus gland. It seems that the butchers had been asked to supply portions of the large gland in the neck of the calf, and, as under one year of age the thymus gland is as large as the thyroid, the mistake arose.

A treatment which has been tried in Germany, and occasionally elsewhere, is the administration of the blood, or blood serum, or even the milk of animals from which the thyroid gland has been removed some time before. The idea is that the use of the thyroid secretion in the blood of the normal individual is to neutralize certain toxins which have been produced elsewhere. In thyroidectomized animals these toxins have accumulated—being unneutralized—and, when the blood of such is administered to a person suffering from Graves' disease, the excess of toxins thus introduced neutralizes the superabundant thyroid secretion and thus relieves the thyroid poisoning. There seems to be a great margin for error here, and the results have not been encouraging, although, as usual, a certain number of cures are reported. G. R. Murray tried the treatment in two cases last year with negative results.

One theory of the nature of the disease (that of Gley) is that in it the parathyroid glands are not acting properly—not controlling the secretion of the thyroid—and that there-

fore this gland is overfunctionating. W. G. MacCallum, of Johns Hopkins University, agreed that Graves' disease might be due to such a cause, and thought that therefore the giving of an extract of parathyroids might be beneficial. He had tried it in one case with great benefit for a time, but the patient unfortunately died of an intercurrent tuberculosis.

Recently, Dr. J. J. Walsh, of New York (*Americal Medicine,* May 25th, 1905) reports some cases in which he used this treatment without any benefit. Since then Dr. MacCallum writes (*American Medicine,* June 10th, 1905) that he has examined the parathyroids in nine cases of Graves' disease and has found them to be practically normal in all. He concludes that " after all there is no sufficient basis for the idea that insufficiency of the parathyroids plays any important part in the production of the symptoms of exophthalmic goitre."

Seeing then that we are so powerless as yet to check the excessive secretion of the thyroid gland or to neutralize the abnormal amount of the secretion in the blood, it only remains for us in most cases to treat the symptoms as they arise. And by so doing we do not merely mark time until such time as the natural return to health is likely to occur. By placing the patient at rest, soothing the nervousness, etc., we undoubtedly hasten this return to health, and even may in some cases so alter the balance as to cause a return to health when otherwise it might not occur, and thus may make the difference between life and death.

An immense number of medicinal remedies have been used from time to time, and it would serve no useful purpose to enumerate them here.

Of those that I have personal experience of, the most generally useful have been belladonna and the bromides. Under moderate doses of these the patients usually quickly become less nervous. Ramsay (*Glasgow Med. Jour.*, 1891), after a very exhaustive study of the subject, came to the conclusion that belladonna is the most valuable drug that we can employ.

Theoretically, digitalis and ergot should do good, by toning up the blood vessels and slowing the rapid heart, but though some good results have been reported, on the whole they are disappointing, and digitalis often seems to do harm and is here peculiarly apt to disturb the stomach. Strophanthus is not so open to this objection.

The employment of preparations of iron has given rise to much divergence of opinion, some thinking that it is most

valuable, while others condemn its use. When anæmia exists, as is often the case, it seems only rational to employ the drug, not for the treatment of the symptoms of Graves' disease, but in order to get the blood into a better condition.

Arsenic and phosphorus are often used for their tonic effects, and it is interesting to note that an Italian worker, Dr. Luigi Macaggi, found by experiments on dogs that both of these drugs lessen the secretion of the thyroid gland through changes produced in the epithelium. Be this as it may, it is quite certain that they have no powerful action in this way when used in medicinal doses.

To recapitulate, the non-surgical treatment of exophthalmic goitre may be summarized as follows:

1. First, and *most important,* the patient should be placed in a state of physical, mental and emotional rest. If the case be at all acute, she had better be kept entirely recumbent, as the upright position will greatly hasten the heart's action.

As a rule these cases do better away from home, either in a hospital or sanitarium. In some cases the strict régime of the Weir Mitchell treatment is advisable.

2. By careful dieting, and in every way possible, the general health should be raised, and anæmia, constipation and every other deviation from normal must be attended to. As has already been mentioned, very few cases of Graves' disease die from the disease itself; death, when it occurs, being due to some intercurrent affection—hence the need of looking after the general health. The climate at a moderate elevation seems to be specially beneficial, and hence such a location should be chosen whenever possible. Nothnagel considers "a sojourn in a place of moderate elevation as most important."

3. Various local applications may be employed, such as pressure to the thyroid gland, or a mild Galvanic or Faradic current; but probably the most valuable local treatment is the application of cold to the thyroid gland, or to the precordium, either in the form of an ice-bag, or as Leiter's tubes. Such use of cold often greatly controls the rapid action of the heart.

4. As regards medicinal remedies, these will vary greatly with the practitioner. Nearly every man has some remedy which he specially relies on; which fact proves, as has been said, what a secondary place all drugs take in the treatment of this condition. Personally, I like to give a mixture of belladonna (10 to 15 minims of the tincture, thrice daily) combined with strontium bromide, and feel convinced that the

patients soon feel very much more comfortable as a result of such remedies.

5. Any special symptoms, such as threatened heart-failure, urgent diarrhea, etc., must be met with appropriate remedies.

Under such hygienic and medicinal treatment most patients will slowly improve, and some will completely recover. But the majority will retain some traces of the disease, such as cardiac irritability, general nervous instability, and some exophthalmos.

The disease is a prolonged one, and the patient requires much patience and all the encouragement that the attendant can give; the latter should resort to mental therapeutics as much as possible.

Lastly, a few cases will get worse, and in a few of them surgical aid seems to be indicated; but this must not be lightly undertaken, as the immediate danger is considerable, and the results are by no means always satisfactory. Kocher has reported many cases now, in which operation has produced very brilliant results; but Ehrlich is much less enthusiastic, and mentions eight cases in which partial extirpation of the thyroid had been done. Several of them were not relieved, or suffered a recurrence of the old symptoms after a temporary relief. Ord and Mackenzie (Clifford Allbutt's "System of Medicine," Vol. 4, p. 502), reviewing the cases operated upon up to a few years ago, conclude that "If we compare the results of operation with those of other methods of treatment, we find no striking difference, except in the death-rate of 12 per cent., due to the operation."

The several cases in which I have seen the most marked benefit from operation have been ones in which a tumor has been present in the thyroid—*e.g.*, a fibroid—and Graves' disease has resulted. Here the tumor seems to have acted as an irritant, causing an overactivity of the gland, much as a foreign body in the eye will produce an excessive secretion of tears, and the removal of this source of irritation by operation has been followed by complete relief of the symptoms.

THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE.*

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The surgical treatment of Graves' disease has attracted considerable attention during the last quarter of a century, mainly because the results of medical treatment, whether hygienic, dietetic, medicinal or electrical, have never been entirely satisfactory. A host of remedies have been recommended, but they merely relieve the symptoms, or hold the disease in check, and only in exceptional instances bring about a cure. This may be explained by the fact that we are yet ignorant of the underlying causes of exophthalmic goitre. The theories which have from time to time been advanced will not satisfactorily account for the many and diverse manifestations of the disease.

Our medical authorities consider the prognosis serious and, when the disease is well established, hold out little hope of recovery. Osler is of the opinion that operative measures seem to offer the greatest relief. It is not my intention, however, to advocate surgical treatment for every case of Graves' disease, regardless of all conditions, both local and general, but only in well selected cases and especially where internal medication and other therapeutic measures have been given a fair trial but without success. All the various phases of each individual case must be given every consideration, and the general rules which govern the surgeon in operating upon any part of the body must be strictly applied. Until we have the desired pathological knowledge of Graves' disease, we cannot hope to treat all cases on a rational basis, but in the meantime, our past experience must, to a large extent, be our guide and the treatment must be more or less empirical.

The different surgical measures for the cure of exophthalmic goitre have all the same object in view, namely, to lessen the size of the thyroid gland. Whether the gland is responsible for all the symptoms is subject to much debate. There is one case on record (Hinchman) where, on autopsy, the thyroid was found absent, although a parathyroid may have been present. Kocher, of Berne, states that he has never seen a well-developed case of Graves' disease without a goitre,

*Read at Meeting of Ontario Medical Association, Toronto, June, 1905.

and Mayo, of Rochester, Minn., says that even in cases without apparent goitre, a careful examination usually discloses a small unilateral or bilateral tumor, which lies deeper, but is firmer than normal.

The exhibition of thyroid extract does not give rise to Graves' disease, although it certainly produces some of the prominent symptoms.

Dr. Crile, from his experiments on blood pressure, believes that the normal tone of the vessels is maintained, first, by a nervous mechanism through the vaso-motor system; and secondly, by the action of the internal secretions, an equilibrium being probably established by the opposing action of the secretions of the suprarenal capsules and the thyroid gland, the former bringing about constriction and the latter dilatation of the blood vessels. If this supposition be correct, two of the main operative procedures for the cure of Graves' disease rest upon a scientific basis, namely, partial thyroidectomy, to lessen the size of the over-secreting gland, and cervical sympathectomy to cut off the nerves which send to the thyroid its vaso-constrictor, dilator and secretory fibres.

Three main theories have been advanced as to the probable cause of exophthalmic goitre, namely, excessive thyroid secretion, changes in the central nervous system or primary alteration in the sympathetic system. Against the second theory it is held that no pathological lesions have been found in the cerebral centres. If the third theory be correct, operation on the sympathetic nerve in the neck should be curative. Excision of the cervical sympathetic, with its ganglia, does, undoubtedly, bring about changes in the vaso-motor control of the vessels which supply the thyroid gland, and also alters the nervous influences on the heart. It moreover relieves the exophthalmos, which MacCallum and Cornell, of Baltimore, have shown to be due to the contraction of a cone of smooth muscular fibres which surrounds each of the eyeballs, and not in any way due to vascular engorgement posterior to the globes. Thus sympathectomy probably relieves the three cardisturbances, symptoms which may also be noticed when exophthalmos.

The theory of hyperthyroidization, or even altered thyroid secretion, is supposed to exert a toxic action on the heart, nervous system and general nutrition. Many cases of cystic goitre show tachycardia, slight exophthalmos, and vasomotor disturbances, symptoms which may also be noticed when excessive amounts of thyroid preparations are administered

internally. It is noteworthy that in myxedema, in which the thyroid gland is absent, that we have a train of symptoms opposed to those presented in exophthalmic goitre. This would indicate the thyroid gland as the main etiological factor in Graves' disease.

Mikulicz and Reinbach believe that the disease has its origin in the vaso-motor centres, but that the hypertrophy of the gland plays a prominent role by adding the phenomena of thyroidism to the other symptoms. This would explain the failure, in some cases, of thyroidectomy, which removes only one of the disturbing factors and still leaves untreated the nervous element, which, no doubt, is of considerable etiological importance.

If the disease is due to a combination of causes, partly nervous and partly thyroid in origin, then a combined thyroidectomy and sympathectomy would meet the indications.

The surgical procedures which have been proposed may be divided into two types: 1. Operations on the gland. 2. Operations on the cervical sympathetic nerve.

Belonging to the first type, many different methods have been adopted:

(*a*) Injection of iodine, iodized glycerine (Rehn), etc., into the gland. This method should be discarded on account of the danger of embolism, owing to the increased vascularity of the gland.

(*b*) Exothyropexy, recommended by Jaboulay, of Lyons. The operation consists of exposing the gland by free incisions over it, partly raising it from its bed, and leaving it exposed in the open wound, covered only by the dressings, to shrink and atrophy. This mode of treatment has never become popular, is slow and dangerous, and does not appeal to modern surgeons.

(*c*) Ligation of the thyroid arteries. This proceeding, which was recommended by Wolfler, for ordinary goitre, is advocated by Kocher for the exophthalmic variety. He usually ligates both superior and one of the inferior thyroid arteries, fearing post-operative myxedema, if all the nutrient vessels are tied. This operation may be combined with partial resection of the gland at the same time; or the gland may be dealt with at a subsequent period, especially in those cases where, after rest, the initial symptoms remain intense. The primary ligation of the arteries renders subsequent resection of the gland much easier, as the danger of hemorrhage is lessened. The superior thyroid arteries are easily reached,

not so the inferior pair, which, in many cases, require luxation of the gland upon the surface before they can be reached and tied without the danger of including the recurrent laryngeal nerves. Rehn, Mikulicz, Reinbach, Rydygier, and Kocher have reported cases successfully treated in this way.

(*d*) Thyroidectomy. The operation which gives the best results is, without doubt, the removal of the lobe of the thyroid gland which is most diseased. The incision may be either a straight one, four inches in length, along the inner edge of the sterno-mastoid, or else an angular one (Mikulicz) or U-shaped (the collar incision of Kocher), along the anterior border of the sterno-mastoid, around the lower part of the tumor, and then up on the anterior edge of the opposite sterno-mastoid. The two latter incisions give free access to the isthmus and do not involve division of any of the deeper muscles, and moreover, the resulting scar is low and not easily seen. This flap, formed of skin, subcutaneous tissue, platysma and deep cervical fascia, is dissected upwards, all vessels cut being immediately tied. The sterno-mastoid is now retracted outwards, and the sterno-thyroid and sterno-hyoid muscles drawn aside or cut, if necessary. The pretracheal fascia, which invests the gland (the capsule of some writers), is now opened by a vertical incision in the median line and the gland is freed from its bed with the finger. This often causes considerable hemorrhage, which can be considerably lessened by first ligating the superior thyroid artery, which enters at the top of the gland, often in several branches, all of which must be separately tied if the main trunk cannot be reached. The true capsule of the gland must, on no account, be opened, or the wound will be immediately flooded with blood and this hemorrhage is with difficulty controlled. The inferior thyroid artery is next dealt with by gradually luxating the gland toward the median line. Care must be taken not to include the recurrent laryngeal nerve with the artery. This nerve, according to Sifton, of Milwaukee, is situated one-quarter of an inch further back on the left side and not so liable to injury. The artery should be secured as far away from the gland as possible to avoid including the nerve. All large veins must be tied to guard against the possible subsequent formation of a large clot in the wound. All pressure forceps may now be removed, as the circulation is fully under control.

On account of the friability and vascularity of the gland, great difficulty is experienced in holding it with any instrument, without causing laceration and hemorrhage. Wither-

spoon (*Jour. A. M. A.*, July 25th, 1903) advises that after exposing the anterior surface of the gland, that heavy mattress sutures be passed from side to side through it, and when these are tied, the forceps catch better, and there is not the same risk of hemorrhage from any slight grandular laceration. The isthmus, which is usually broad and vascular, is next ligated with silk. After the wound is rendered dry, the deep fascia and any cut muscles are brought together with fine cat-gut, and finally the skin is stitched with a subcuticular horsehair suture. If there has been much manipulation of the tissues, causing subsequent oozing, or if deep planes have been extensively opened up, drainage must be provided for the first forty-eight hours, by passing a small tube from the lowest part of the wound through a puncture in the skin just above the suprasternal notch (Cheyne); otherwise experience has shown drainage to be unnecessary.

(*e*) Operations on the sympathetic nerves. In 1889, Alexander, of Edinburgh, resected the superior cervical ganglion for epilepsy. In 1896, Jaboulay, of Lyons, first divided the sympathetic for Graves' disease, and later in the same year, Jonnesco, of Bucharest, excised both the superior and middle cervical ganglia for exophthalmic goitre, chronic glaucoma, and epilepsy. The results were, however, insufficient, and the operation was extended until complete bilateral resection of the entire sympathetic with its three ganglia was advocated. Kocher, in some cases, combined sympathectomy with partial removal of the thyroid or ligature of the arteries. Sympathectomy is highly spoken of by Curtis and Deaver (*Annals of Surg.*, Aug., 1903).

This operation is performed on the supposition that nervous influences are responsible for Graves' disease; the tachycardia to irritation of the sympathetic branches which supply the cardiac plexuses with accelerator fibres; the goitre, to stimulation of the vaso-motor nerves to the thyroid gland, supplying the arteries and the secreting epithelium; the nervous and digestive phenomena, to permanent cerebral anemia caused by continuous excitation of the vaso-constrictor fibres of the cervical sympathetic passing to the brain mainly with the vertebral arteries. Section of these fibres produces cerebral congestion.

The sympathetic is approached by a long incision, either along the anterior or posterior border of the sterno-mastoid muscle, which, with the great vessels of the neck, are displaced forward and the nerve dealt with.

All operations for exophthalmic goitre are not without danger, due mainly to three causes, first, hemorrhage; second, acute thyroidism; third, the anesthetic.

The hemorrhage is attributable to the friability of the organ, the fine structure and dilated condition of the vessels causing great vascularity. Extreme care must therefore be taken in handling the gland until the main arteries have been secured, and every vessel, when cut, immediately tied. Hemorrhage undoubtedly stimulates the absorption of thyroid secretion, and also increases the danger of shock. Should much blood be lost, the quantity may be made up by the injection of saline solution. The cautery should not be used, on account of the risk of secondary hemorrhage.

The occurrence of post-operative thyroidism, or thyroid poisoning, is a most dangerous complication. The symptoms come on within twenty-four hours.. The temperature rises even to 107 deg., F.; the pulse runs up to 130, 160, or higher; the respirations increase and may be of the Cheyne-Stokes' type; the patient becomes extremely nervous, tremulous, and perspires freely; tetany is often observed and death frequently occurs suddenly.

No satisfactory explanation of acute thyroidism has yet been offered. It is attributed to increased absorption of thyroid secretion from the wound, or to rough handling of the gland, pressing the secretion into the circulation. This, however, is negatived by the fact that the symptoms do not immediately ensue, and also that thyroidism occurs after sympathectomy, where the gland is untouched; and after tying the supplying arteries; or even after operations on other parts of the body, as on the pelvic organs. It would seem that the nervous irritability, combined with the results of the increased absorption of thyroid secretion are responsible for the symptoms. The treatment consists in saline injections, suprarenal extract, with atropine and morphine.

It is an established fact that patients suffering from goitre, especially the exophthalmic variety, take a general anesthetic badly. Many fatal cases from this cause have occurred during operation. On this account, many operators, as Kocher, Curtis, Witherspoon, and Ballin, consider the administration of chloroform and ether dangerous in goitrous subjects and have recommended and used local anesthesia quite extensively in their work. Mayo gives preference to ether, and reserves cocaine for the worst type of nervous cases. It has not been proved that cocaine increases the symptoms of Graves' disease,

an opinion advanced by Riviere and Edmunds. The formula used by Barker, of London, in which cocaine is replaced by the safer beta-eucaine, combined with adrenalin chloride, is much to be preferred.

Fenger points out that degeneration of the heart muscle will account for some of the sudden deaths, while the absorption of thyroid secretion, shock, anemia and general nerve exhaustion will account for most of the fatal cases not attributable to the anesthetic.

The results of the surgical treatment of exophthalmic goitre have, on the whole, been very satisfactory. Chas. H. Mayo (*N. Y. Med. Rec.,* Nov. 5th, 1904) reports 40 cases with 6 deaths. All of these had received prolonged medical treatment previous to operation. He reports 50 per cent. of early cures; 25 per cent. after some months, and 25 per cent. improved. In aggravated cases, he advises preliminary treatment by belladonna, and X-ray exposures. Curtis' report of Kocher's 59 cases gives a mortality of 4. In 1896, Starr collected 190 cases with 12 per cent. mortality, and Kinnicut, in the same year, 187 cases, with a death rate of but 7 per cent. I have been able to collect 9 cases operated on in Toronto during the last three years, with a mortality of 2, one at the time of operation and the other, in an asylum, after four months.

A perfect cure may be expected in 60 per cent. of the cases of thyroidectomy. Although sufficient time has not yet elapsed for us to judge of the permanence of the cure in Graves' disease by the operation of sympathectomy, an immediate good result appears to be the rule.

45 Bloor Street, East.

THE DUTY OF THE PROFESSION AND STATE AS REGARDS THE MENTAL AND PHYSICAL CARE OF IMPROPERLY CARED FOR CHILDREN.*

By CHARLES J. HASTINGS, M.D., Toronto.

Mr. President, Ladies and Gentlemen of the Ontario Medical Association,—When many of us entered upon the study of medicine, nearly a quarter of a century ago, the highest ambition of the profession was to cure disease, but the advances in medical science in that quarter of a century has placed the goal in a higher and nobler position, namely, the prevention of disease. However, the enormous rate of infant mortality throughout the civilized world, suggests the existence of an unpardonable apathy, or casts an awful blot upon the intelligence of both the profession and the state.

Vital statistics show that not 50 per cent. of all babies born alive ever reach maturity. In England there is one death in every five births before the child is a year old. Out of over 60,000 births annually in Paris, 30,000 die before they reach four years of age. In New York City, out of nearly 75,000 births, 20,000 die the first year. In the Province of Ontario, in 1903, out of 48,642 births, 6,700 died within the first year, and 10,162 before they had reached their fifteenth year. Now, a large per cent. of these die from malnutrition or improper feeding, through ignorance on the part of the mothers and those in charge, and are, therefore, largely preventable.

Education along this line must come from the profession, and the means by which it can be accomplished, from the State.

If the government were to spend even a fraction of the money spent on stocks and agriculture on the care and feeding of these poor mothers when they are carrying the children, and subsequently the children, if it can be shown that they can not be properly cared for or provided for in their own homes, the death-rate for the first year, at least, should be very much decreased.

We have in this fair Dominion of ours, conditions suited to produce the very best physical development, and the highest degree of mentality that can be produced any place in the world.

It matters not whether he be an aspirant to the highest medical honor at the hands of the British Empire, or for a

*Read before Ontario Medical Association, Toronto, June, 1905.

professorship across the line, the man behind the gun at Wimbledon, the man at the oars on the Thames, or the men in the battlefields of South Africa, the high mental calibre and physical endurance of the Canadian always places him in the front ranks.

Why then should we permit this embryotic material for such productions to die or degenerate by the thousands annually for want of proper care? It costs our Government at Ottawa $745,000, nearly three-quarters of a million, last year for immigration purposes alone. Thousands are being imported annually, of Russians, Finns, Italians, Hungarians, Belgians, Scandinavians, etc. The lives and environments of a large number of these has, no doubt, been such as is well calculated to breed degenerates. Who would think of comparing for a moment in the interests of our country, morally or commercially, a thousand of these foreigners with a thousand of Canadian birth? No medical inspection can recognize the seeds of degeneracy which may be well rooted in this foreign element. One of the greatest curses of our neighbors to the south of us is due to the enormous foreign element, which practically hold the balance of power. And yet practically no effort is being made, except in Ontario; no money expended to insure the best mental, moral and physical development of our boys and girls, and why is it so? Simply because, from the view-point of the average politician, merchant, financier or professional man, in the parlance of the street, "there is no money in it." But there is money in it. What other national question could compare in importance, with the establishing of a well-organized plan by which the highest development of the youth of that nation can be accomplished? Every nation must recognize the fact that what it will be twenty-five or fifty years hence depends largely on the boys and girls of to-day; therefore, a good physical development, with a high mentality, is the most valuable asset that any nation can have. But it is evident that the parents and the government require educating along this line, and it is for obvious reasons the medical profession that must educate them. The family physician, who has piloted his various families through many physical storms, notwithstanding that he has had shipwrecks and lost lives, yet he has the confidence of these families, and is their counsellor and judge in all that pertains to the physical and mental at least. If he advises them as regards the best means of developing their children mentally and physically, they will, in the vast majority of

cases, accept his advice. When I speak of improperly cared for children, I do not by any means limit myself to the children of the destitute. The knowledge of food values and the proper method of cooking food of the average housewife is very limited indeed.

The Dominion Government spent last year over one-half million for the advancement and improvement of agriculture and stock. Literature was distributed gratuitously advising stock raisers how to properly care for and protect their stock. Surely, then, the child has some right to consideration.

We as a nation have passed through our infancy, and are now in a rapidly developing childhood, with boundless resources in active process of development and a rapidly increasing population, and must soon become a great and wealthy nation, but we must profit by the experience of the Mother Country, and, in fact, all older countries, that "as wealth accumulates, men decay."

The inroads of degeneracy is being felt already in most of our larger cities. On the continent of Europe, France was the first to recognize the fact that her people were rapidly degenerating, and she probably more than any other country, is putting forth every effort to overcome the evil, and by a well-organized system is carefully looking after the proper feeding and education of their youth.

I presume that the United States is suffering more than any other nation from the neglect and indifference of the care of its youth. Dr. G. Frank Lydston, in "Vice and Crime," states that, even fifteen years ago, the degenerates in the U. S., according to the census, numbered about 215,000, and that about one in every 320 is a criminal, insane, or a pauper. Dr. Lydston goes on to say that the question of degeneracy is no longer one of sentiment, but one of the greatest national interest, as a glance at the cost to society of the criminal will readily demonstrate. Every nation finds that most of its disbursements, in times of peace, is for the suppression or punishment of crime and vice. The cost to every honest man in the U. S. is from $3.00 to $5.00 per annum to protect the good from the evil, the just from the unjust. For this purpose alone the Government expends $200,000,000 annually; adding to this the non-productiveness of the criminals, you bring it up to about $500,000,000, or about $25.00 per family.

Think of the recent appalling revelation from New York,

by Mr. Robert Hunter, that in New York City alone from 60,000 to 70,000 school children were suffering from underfeeding, thousands being sent to school without any breakfast. As a consequence of this revelation, Mr. John Spargo made a very careful investigation by visiting the schools, and interviewing the teachers, had the homes visited by trained investigators, also obtained the testimony of physicians of large experience among the poor, also the heads of large hospitals, dispensaries and those engaged in mission work, all of whom, from their experience and personal observations, were of the opinion that Mr. Hunter had, if anything, underrated the extent of the evil. Mr. Spargo's investigations revealed the fact that there are in the United States nearly 3,000,000 children underfed, and therefore under-developed, mentally and physically. A very large per cent. of those admitted into the hospitals and seen at the dispensary were there as the result of either from underfeeding or improper feeding.

In a recent letter in the *B. M. J.*, from Leeds, where the matter of underfed children has been investigated by the Educational Committee, they discovered that almost 7,000 underfed children were in attendance at the elementary schools. Dr. Wm. Hall, a retired physician, made some careful experiments with these children by procuring for each child one good adequate meal a day. In two weeks' time some of the half-starved little mites of seven and eight years of age gained in weight at a rate that would have averaged nearly thirty pounds a year for each.

That this condition exists to a greater or less degree in our own cities is a lamentable fact. I have learned from those engaged in mission work in the poorer parts of Toronto that hundreds of children go to school with nothing but a piece of bread and jam or bread and butter, and there are numbers of homes in which no table is set from morning till night, the little tots simply go to the cupboard and get what they can. What has been found in many places is: new bread, butter, and an open can of salmon, or lobsters, or jam, and in many cases bread alone; and in many others the children are sent with baskets to the hotels for the scraps, and these scraps constitute their *menu* for the day. So that it is evident that our children are suffering more from improper feeding than insufficient. We are practically in our infancy yet, but we must profit by the experience of older nations and prepare to avert the disaster.

I regret that time will not permit of my making but a brief

reference to the very admirable work that is being done in Ontario by Mr. Kelso and his staff of workers. They have established between thirty and forty Children's Aid Societies in various parts of the Province. The duty of these Societies is to receive complaints in regard to neglected or destitute children, cases of alleged cruelty to children, incorrigible children, and persistent cases of truancy; to take charge of them, and with firmness and kindness and proper nourishment, hope to reform them, and, where necessary, to secure proper foster homes for them. Representatives from the shelter in Toronto are in daily attendance at the children's court to look after the little offenders, that they may not become mingled with the hardened criminals, realizing, as they no doubt do, that they are there as a consequence of having been sinned against rather than sinning.

In support of this work the Ontario Government contributes the nominal sum of ten thousand dollars. With this and bequests, the Society in Toronto has dealt with over 14,000 cases since its inception, and in the last nine years the inspectors of the Society have dealt with 6,388 police court cases affecting the interests of children.

We have, therefore, a very good nucleus in this Province for the establishing of the more comprehensive system which I am endeavoring to set forth in this paper, for the accomplishment of which the government and the profession must cooperate.

Psychologists assure us that mental, moral and physical degeneracy go hand in hand. This is well attested by observations made in the children's courts in the various cities. Insufficient and improper feeding, badly ventilated homes, environments of filth and dirt, constitute the very hot-beds in which criminals are bred, and from which the criminal ranks are filled, and our streets, lanes, and alleyways, after nightfall, are the schools in which they receive their training, the younger from the older. Here their bad habits are acquired, their plans laid, and from which they graduate, and yet those in authority are doing nothing to keep our children off the streets at night and out of the schools of vice. The highest and noblest aim in the treatment of degeneracy, crime and vice, as in treatment of physical disease, is prevention.

In Chicago, in 1902, there were arrested for breaches of the law, 13,090, under twenty years of age. Of these, 3,785 were under sixteen. In New York City, in 1903, there were 7,647 children under sixteen had judgment passed on them in the

children's court, and in the city of Toronto, in 1904, there were 499 little offenders summonsed to the children's court. Is not the necessity for a children's court a disgrace to civilization?

Man's inhumanity to man has stood out in blazon letters through all the ages. Apparently only a calamity, or an impending calamity will arouse mankind, individually or collectively, to a sense of their duty toward their fellowmen.

It is only within the past two years that Great Britain has been aroused from her national somnolence by what seems to be a threatened national calamity—the mental and physical degeneracy of her people. This matter was brought up in the House of Lords, in July, 1903. In discussing the subject, Lord Meath and the Bishop of Ripon drew the attention of the Lords to the lamentable condition of the poor. The Duke of Devonshire admitted that Great Britain's military and industrial outlook was being seriously threatened. The outcome of this debate was the appointment of a Royal Commission to ascertain the cause of the rapid inroads of degeneracy. Sir William Anson, Parliamentary Secretary of the Board of Education, in bringing the matter before the Commons, stated that there were 60,000 children then in attendance in the London schools who were physically unfit for instruction. The statement was made by Sir Frederick Morris that 60 per cent. of the men who applied for admission to the army were physically unfit. The cause of this degeneracy, as found by the Royal Commission was, for the most part, improper care in childhood, malnutrition, improperly cooked foods, inferior in quality and insufficient in quantity, unsanitary homes, overcrowded and badly-ventilated rooms.

It was found that 50 per cent. of the children in London were improperly cared for, underfed, irregular hours, insufficient sleep, on the streets at all hours of the night, when they should be in their beds. Referring to the schools, they felt that while compulsory education had been of benefit mentally and morally, it was not physically. Children, half-nourished, poorly clad, long hours of confinement in over-crowded, badly-ventilated rooms, closely confined to work for hours at a time, much of which would be of no future use to them.

Let us now pass on to the improper care of the child mentally. Many of you are no doubt familiar with the inscription on one of the most famous public monuments in Paris, which reads as follows: "After bread, education is the great necessity." The "ideal education must aim at the develop-

ment of the best mental, moral and physical life of which the child is capable." While there is no work in the State more important for its well-being than the mental development of the child, yet this must never be obtained at the expense of the physical. As Herbert Spencer says, "People are beginning to see that the first requisite to success in life is to be a good animal."

Was it not a lamentable oversight of our Legislature when they made education compulsory that they forgot to provide for the proper nutrition of the body, without which it is practically impossible to develop the mind, and the State has no right to attempt to do so. When it compels a child to attend school, it is the duty of the State to see that that child is properly protected, physically and morally. This is the individual right of the child and the right of the community.

Is it not incumbent then upon the municipality or the State, to see that the rooms in which these children are confined are in a perfectly sanitary condition, and from a hygienic standpoint, properly equipped.

Medical inspection for schools was organized early in the nineteenth century in Austria, Sweden, France and Germany, but was not introduced or adopted in England until 1889, and in Scotland in 1892, and in the U. S. early in the nineties, in Boston, Philadelphia, New York and Chicago, and is now adopted in all the leading cities in the States. When we consider what hot-beds public schools are for all infectious diseases, the necessity of medical inspection, even for this alone, is self-evident. Where systematic inspection has been adopted there has been a very marked decrease in contagious diseases among children, and in many cases epidemics have been averted by early removal from the schools of mild forms of the various diseases. The neglect of this safeguard to the pupils and to the community would, therefore, seem to be inexcusable in any Board of Education or Board of Health. Of no less importance, however, is the health of the mind than that of the body. The ill effects of overwork, over-mental strain from too prolonged concentration on any one subject, routine examinations, etc., has resulted in nervous breakdowns and nervous reactions. Much has been done in recent years, and much is being done to overcome this by the writings of such men as Pestolozzi, Froebel, Oppenheim, Spencer, Bain, Pauli, Stanley Hall, and many others, all of whom disapprove of test examinations in the schools. All authorities on the nervous diseases of children are agreed as to the ill effects,

especially on children of nervous temperaments, of this intense strain, coming on, as they usually do, at the end of the sessions, when the children are already nearly exhausted.

How many young men and boys have paid for their scholarships and gold medals with a large slice of their constitution, if, indeed, not with their life? An intimate friend of mine not long since secured his first-class A certificate when he was seventeen, and spent the two subsequent years under Dr. Clark in the Queen Street Asylum. As Dr. Clark expressed it, the result of running a twenty horse-power engine at a forty horse-power pressure.

The fond parents of the precocious child, delighted with its unusual activity of mind, encourages it on, as does ofttimes the educator, not dreaming that to the psychologist this very precociousness is evidence of a mild form of degeneracy. You rarely find with this premature mental condition a well-developed physical. Galton, in his study of distinguished men of science in England, found that nineteen out of every twenty were men of unusual physical energy. While we can't hope to develop a nation of Bismarcks and Gladstones, yet we are serving the best future interests of the nation when we see that the physical is kept well in advance of the mental.

Dr. Weir Mitchell, in an address delivered to the teachers of Philadelphia last summer, drew special attention to the dangers of examinations and eye-strain, stating that he had made a careful study years ago in his clinic in regard to chorea (St. Vitus' dance) alone, and always noticed an abrupt upward curve at the period of examinations and their approach, and also other marked nervous symptoms at these periods. The children will cry easily, are irritable, restless at nights, starting up in their sleep, ofttimes dreaming about their examinations.

This has been recognized by most progressive Boards of Education abroad, and the examinations have been done away with and other plans suggested and adopted. I regret to say that, notwithstanding Mr. Hughes' (Public School Inspector) efforts along this line, we are still much behind.

A very common cause of apparent mental dullness or deficiency in school children has been discovered to be due to defective sight or hearing, or both. Referring to this, Dr. Weir Mitchell says that, having drawn the attention of the profession thirty years ago to the fact that a large percentage of cases of headache were due to bad eyes, and having thereby successfully wrestled with so common an evil as headache, he counts

as one of the happiest memories of a lifelong contest with disease. Dr. Mitchell goes on to say that in school children imperfect eyes cause headache, vertigo or even a confusion of mind that makes study impossible. The child gets credit for being stupid or idle, but a pair of glasses makes the differential diagnosis between lazy vice and studious virtue.

In Switzerland, Germany, and other European countries, and in some of the leading American cities, where systematic medical inspection has been made, it is surprising the number of children that have been found to have defective sight. In some instances as high as from 20 to 50 per cent., and the majority of these were found to require glasses. From 10 to 20 per cent. of the children examined were found to have defective hearing. When we consider that the eyes and the ears are the chief avenues through which all knowledge must come to the child, we can readily see the necessity for, and the importance of, such an inspection.

Now, in conclusion, there are three important points I wish to emphasize:

(1) That in view of the fact that the lamentable mortality in infancy and early childhood is due to improper feeding and hygiene, the result of ignorance on the part of mothers and those entrusted with the care and feeding of infants and children, that in the best interest of the state the government should supply in pamphlet form full information for the proper care and feeding of infants and children, the same to be supplied through their family physician.

(2) That according to statistics, next to malnutrition, infectious and nervous diseases is the most important factor in causing this large mortality; therefore a systematic medical inspection of schools is absolutely necessary to ensure safety to the child and to the community, and that this Association co-operate with the various Boards of Health and Boards of Education to secure this further safeguard to human life.

(3) That it is the duty of the State towards its improperly cared-for children to give them a good physical, mental and moral start till they are sixteen years of age, and the majority of them will develop noble men and women.

These seem to be the rocks upon which the medical profession may be the beacon light to keep the rising generation from a mental, moral and a physical shipwreck.

ON WARDS IN GENERAL HOSPITALS FOR ACUTE, NERVOUS AND MENTAL DISEASES.*

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Having, in a recent paper on "Neurology and the Prevention of Insanity in the Poor," advocated the establishment of wards or pavilions in connection with general hospitals, I hope a few remarks on how this plan is succeeding in other countries, especially in Great Britain, Germany and the United States, may be of some interest to the members of this Association. In Great Britain the only wards in operation are at Glasgow, where most satisfactory and encouraging results have been obtained. The beginning here was in a few wards, which were unsuitable, from a hospital point of view, for the reception of so-called "nervous cases." In spite of this objection the results were so encouraging that in June last a pavilion, properly equipped for the purpose, was erected in connection with one of the general hospitals. The statistics of the work in Glasgow thus far published show that about 65 per cent. were discharged, recovered or relieved; a very gratifying result.

It is to Germany, however, that we must turn for a longer experience of this method of treatment, as the first wards for the purpose were here put in operation, a fact which I believe accounts for the high standing in the teaching of mental diseases in that country, which is generally acknowledged to be the most advanced in the world to-day. To Griesinger belongs the credit of having framed the first coherent plan for the establishment of these wards in Germany, although they had been advocated since 1860. Scholtz established isolation rooms and observation wards in connection with the Bremen general hospitals in 1870, and Reijers at about the same date organized a similar provision at Wurtzburg for fifty or sixty patients. The first clinic for these cases was opened by Furstner at Heidelberg in 1878, and it was here that Kraepelin did such excellent work. A few months after the opening of this clinic at Heidelberg, Fleichsig opened the second clinic at Leipsic. The number of these has since steadily increased, so that there is now such a clinic in each of the twenty universities, conducted either in wards specially

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devoted to the purpose in general hospitals or in buildings independent in their neighborhood.

In the United States several cities have already put this plan into operation, among which may be mentioned New York, Philadelphia, Pittsburg and Albany.

In Bellevue Hospital there is a separate pavilion for these cases which contains two wards, one for men and one for women. It is in charge of three resident salaried physicians, and has four consulting alienists and neurologists on its staff; the medical and surgical visiting staff may also be called in consultation. The men's ward is in the care of a woman supervisor with long experience among the insane, and the orderlies are assigned from the State hospitals for the insane for specified terms. The women's ward is in care of a head nurse and the nursing is done by pupil nurses of the Bellevue Hospital Training School for Nurses. Patients are brought as emergencies by the police or by friends who claim they are insane; or they are committed for five days on a charge of insanity by a magistrate upon application of friends; or are committed by the Superintendent of the Out-Door Poor for five days for observation; or they may be transferred from the general wards of the hospital. Patients stay rarely as long as ten days; five days is the usual outside limit. If found, on sufficient observation, to be insane they are committed at once to a State hospital, or they are discharged or given in charge of their friends, or transferred on account of medical or surgical ailments to the appropriate wards in the general hospital. Instruction to students is contemplated, but not begun. The cases passing through this pavilion are numbered by thousands. This pavilion is merely a distributing station from which patients are sent to the appropriate place of relief as soon as this can be determined.

At Blockley Hospital, in Philadelphia ,the municipal almshouse and the general and insane hospitals are grouped under one management. Here four wards, two for men and two for women, in the building of the general hospital department are used for reception or detention wards. The building is old, and, as it was not intended for the purpose, it is not satisfactory. These wards are in charge of a salaried resident physician and the nursing is done by the nurses of the general hospital. The patients are brought by friends or by the police as emergencies, or on certificate of insanity. Those patients who are likely to require hospital residence for a month or

more are transferred to the insane hospital department. Others are kept in the detention ward for two or three weeks, and are discharged from there or sent to the appropriate wards of the general hospitals.

At Pittsburg, the general hospital of St. Francis has four well-equipped wards which have been in operation a number of years, with highly satisfactory results. The nursing is done by sisters, and the wards are in charge of a neurologist. This latter fact accounts, I believe, for the classification of the patients received, viz., those who exhibit departures from normal mental health.

The best existing pavilion, however, in the United States is at Albany. Pavilion F of the Albany General Hospital has been in operation for the last three years. The physicians of that city, and the neighboring cities and towns of the county, warmly advocated the construction of this pavilion, their feelings having been sharply stimulated by the deaths of two of their number in the county jail, in which they had been placed from mental disorder. Applications for admission were received before the building was completed. The pavilion is connected by corridors with the main building, and contains two locked wards of seventeen beds each, all but four of which are single rooms. The plan of the building is such as to provide accommodation for restless patients, so that any disorder might not disturb other wards, or even other parts of the same ward. Hence, there is little need to interfere with the activity of a patient on other ground than his own safety, and consequently the motor restlessness characteristic of active mental disturbance may be permitted. The whole ward is capable of being subdivided into smaller sections, which allow segregation into small groups of three or four patients. Hence quiet patients need not be disturbed by noisy or turbulent ones. This architectural feature is most important, as it permits the treatment of all classes of patients in close proximity to one another. The pavilion is in charge of a physician with experience in hospitals for the insane, who visits the patients twice daily. The medical and surgical staff of the hospital may be called into consultation. The nursing staff is in charge of a supervisor trained in both insane and general hospital work. The nurses are assigned from the hospital training school for a specified time. There is but one male nurse in the pavilion. Almost no restraint or sedatives are used. Delirious patients from the general wards, and any suitable patients, are admitted without commitment or

other formality. Patients are kept from a day or two to six months; clinical instruction is given to the students of Albany Medical College. The third annual report of this pavilion, showing the forms of disease and the results of treatment for the past three years, has been recently published and is most interesting. The forms of disease admitted include nearly all the acute, nervous and mental diseases, from neurasthenia and hysteria of the former, to acute delirium and mania of the latter. Of the total number admitted, viz., 570 to date, 170 were discharged recovered, and 160 improved, or a total of over 60 per cent. of admissions, a most satisfactory and creditable result to the physician in charge. I will not detain you with further details, but I hope the above remarks have shown that from actual experience, both nervous and mental disease may be successfully treated in properly equipped wards of a general hospital.

Are such wards required in this country to-day? To this question there can be but one reply, were it only to prevent committing the insane poor to jail, a disgrace to our twentieth century civilization. There are, however, many important reasons why these wards should be established without delay. One is on account of the clinical instruction to students in functional nervous diseases and acute mental disorders as they occur in every-day practice. The lack of this instruction in the past has led to a chasm of greater or less dimensions between insanity and the other diseases which the general practitioner meets daily owing to the fact that insanity in its various forms is regarded as a separate entity, to be treated only by an alienist in an asylum, and not, as is really the case, simply a more developed stage of an acute disease of the nervous system, due to disturbance of the functions of the brain. It is a lack of realization of the physical basis of mental troubles which maintains this separation, and if the student were shown the actual changes which take place from the earliest symptoms of cerebrasthenia to the fully developed case of insanity, which could only be demonstrated in such wards as these, a bridge would rapidly be formed over this chasm. This bridge must be formed by the general practitioner for the simple reason that it is under his care that these cases first come, and, consequently, on him must rest the responsibility of their early treatment, the period when the best results are obtained and when delays are most dangerous. There can be no doubt that clinical instruction in the pre-insane stage of these functional diseases of the brain will offer

better results to the human race, than that in any other department of internal medicine. Too little stress has been laid on the importance of clinical teaching, especially in the early stages of these troubles, by those who have written on the subject, and I firmly believe that had these diseases been taught in the past with as much care and attention as has been given to diseases of the heart or lungs, for example, neurology, as well as psychology, would have been greatly benefited, and the changes now being brought about would long ago have been accomplished. Better clinical instruction would have led to the active treatment of these cases in the early stages, instead of waiting until the boundary line of insanity was crossed, a most important consideration, since it would have demonstrated that in a large proportion of cases an attack of insanity would have been prevented.

It is especially towards this latter aspect of the question that I would like to direct your attention. Having for many years devoted my entire attention to neurology, to which these functional nervous troubles yield an important quota, I am convinced, from actual experience, that early treatment has resulted in the restoration to health of a very large percentage of these cases and prevented an attack of insanity.

As the benefit to be derived from such wards was discussed in the recent paper referred to, may I be pardoned for reproducing the summary there given.

"With one or more of such wards in operation, the first object aimed at, *viz.*, the alleviation of suffering in the poor, by proper hospital treatment for their disease, would be attained. In addition to this, there would result, at least, the following:—

(1) Better facilities for clinical instruction to the medical student. Here the student could be shown these cases in his daily round of work, and be able to study these diseases of the brain, just as he studies in a neighboring ward diseases of the heart or of the lungs. He would learn to give the same attention to disease in this one organ, as he now gives to diseases in all the other organs, and the importance of the study would be brought home to him in a way, which is at present impossible. He would realize the importance of active treatment in these cases, and his responsibility in allowing them to pass over the boundary line of insanity without adequate treatment. The study of these cases in their early stages would also enable him to recognize such conditions in private practice, and to take such steps, as may save a mind

from destruction, a result more desirable, even than saving the body.

(2) A better knowledge of these diseases would result in the whole profession recognizing the necessity, for example, of hospitalization of asylums, and instead of the scanty number of specialists who are now endeavoring to bring about this good work, there would be a solid phalanx formed by the whole profession, to the requests of which the Government would be obliged to accede without delay.

(3) To the nursing staff of a general hospital such wards would be a great boon, since frequent as these cases are in private practice, but little opportunity to learn the art of nursing them is afforded in a general hospital.

(4) By admitting such patients into the wards of a general hospital, any acute case of alleged insanity would at once be admitted without a certificate, on precisely the same conditions as though the patient were suffering from other disease than that of the brain, and by this means the cruelty and injustice of taking these patients to a jail would be abolished. Under these conditions, recourse to early treatment would be sought; since the prejudice against asylum treatment would be removed and much better results would necessarily follow. The stigma in the minds of the laity, of having been treated in an asylum, would also be obviated. Further, the treatment of these patients in a general hospital, by the same methods as all other patients are treated (due allowance being made for the form of their disease) would gradually lead to a more rational view of insanity in the minds of the masses, and thus gradually overcome the prejudice against asylums.

(5) A large portion of suicides would be prevented, since there is no doubt that many a sufferer from cerebrasthenia has ultimately given up in despair, and some additional grief which, in health, would only have caused temporary depression, has, under the circumstances, turned the scale, and another suicide is added to the long list of these disasters published daily in the newspapers.

(6) And probably, most important of all, insanity would be prevented in a very large portion of cases.

From an economic point of view the prevention of insanity in the poor merits the careful attention of the state. If insanity were prevented in only 50 per cent. of the patients admitted into such wards as I have suggested in a general hospital, who, without this treatment would have become insane, what an excellent investment such wards would be to

the government. The cost of maintenance for even a single insane patient to the government, extending, as it sometimes does, over fifty years, if added to the value of his services as a wage-earner during this long period, would alone furnish sufficient money to build and properly equip a pavilion in connection with one general hospital. I will not detain you further, but I hope sufficient has been said to direct the attention of this Association to the urgent need of wards in general hospitals for acute nervous and mental diseases.

In conclusion, I would like to acknowledge my indebtedness for the information contained in the earlier part of this paper to Dr. Montgomery Mosher, of Pav. F. at Albany, and to Dr. Theodore Diller, of St. Francis Hospital, Pittsburg. The papers on these wards by Dr. E. Stanley Abbott and Dr. L. Pierce Clark and Mr. H. P. Alan Montgomery, Ph.B., architect, of New York, are also most valuable contributions to the subject.

SURGERY OF THE STOMACH FROM THE STANDPOINT OF THE CLINICIAN.*

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There are many reasons why surgery of the stomach should be more and more interesting to the clinician. Chief among these is the fact that with the increasing clinical experience in this field, it has become possible to perfect the diagnosis of conditions far beyond the degree to which this could be done only a few years ago, when it was possible to actually confirm diagnoses anatomically only in those patients who could be subjected to an autopsy. In the vast majority of cases the diagnosis was made upon theoretical grounds. The patient was treated and improved temporarily; during a subsequent attack some other physician made the same or a different diagnosis, which again could not be proven anatomically, the difficulty arising from the fact that no one could prove or disprove the diagnosis in either case. The moment a case becomes surgical, however, this difficulty is abolished, because the diagnosis can and must be proven to be right or wrong.

There is much ante-mortem pathology in diseases of the stomach, as well as in diseases of all the other intra-abdominal organs, which can be studied properly neither post-mortem nor ante-mortem, unless the organ is exposed to view; and no sooner has this been done in a large series of cases than the diagnosis of the condition becomes much simpler and easier and gains greatly in certainty.

Gastric Ulcer.—The condition which primarily or secondarily leads to the greatest amount of stomach surgery is the ulcer. The operation may be indicated: 1. Because of the painfulness of the ulcer. 2. In order to control (*a*) acute or (*b*) chronic hemorrhage. 3. In order to prevent secondary conditions such as (*a*) perforation; (*b*) peritoneal adhesions; (*c*) pyloric obstruction due to cicatricial contraction; (*d*) hour-glass stomach; (*e*) gastric dilation due to obstruction; (*f*) starvation; and last, but not least, (*g*) implantation of carcinoma in the ulcer.

Diagnosis of Ulcer.—Since the presence of gastric ulcer

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primarily is the beginning of so many of the surgical conditions, it is important to recognize this lesion early in its development.

The most constant symptom in the presence of this lesion is pain. This is usually located below the tip of the sternum, is increased upon pressure, and upon taking food. The patient can usually tell which food will cause the pain to become severe. If the ulcer is on the posterior surface of the stomach the pain radiates into the back, usually to the left of the median line and up as high as the lower end of the scapula.

Very commonly the pain accompanying the presence of gall-stones is mistaken for the pain due to gastric ulcer, but it is usually not difficult to differentiate between these two, because the former is increased upon pressure at the point between the end of the ninth rib and the umbilicus, a point first located by Mayo Robson, while the latter is increased upon pressure in the median line.

Again, in case of gall-stones the pain in the back extends to the right at about the level of the ninth rib, while in gastric ulcer it is greatest in the median line or to the left of this and higher up.

The stomach contents are usually exceedingly acid in the presence of gastric ulcer, and there is an abundance of free hydrochloric acid present unless the ulcer has become carcinomatous. It should, however, be stated here that the chemical examination of stomach contents must always be looked upon only as of value in corroborating diagnosis, made as a result of a study of the history and physical examination. Robson and Graham have demonstrated this fact conclusively in a large series of carefully studied cases.

The history usually states that the patient has felt distress upon eating for a considerable period of time; that there has been eructation of acid stomach contents; that this is much more severe when certain articles of food have been taken; that the patient is much less uncomfortable when carefully following some diet which experience has taught him to select.

Quite frequently the feces are observed to be black from the presence of partly digested blood from slight gastric hemorrhages.

So many of the patients have, however, received subnitrate of bismuth as a remedy, or some form of iron, that care must be taken not to confound the effect of these remedies upon the color of the stools with that of hemorrhage from a gastric ulcer.

Frequently these hemorrhages have not been observed, but still the loss of blood has been sufficient to cause a marked anemia, hence this condition must be considered in connection with the other symptoms and the history. In patients who are severely anemic and who are suffering from some form of gastric disturbance, one can usually demonstrate the loss of blood from chronic ulcer by a careful study of the case. Fuetter has demonstrated that by overcoming this anemia by careful dieting, many chronic ulcers will heal, which without especial attention to this feature seemed quite incurable under non-surgical treatment.

With careful internal and especially dietetic treatment, a vast majority of all cases of ulcer of the stomach which have been recognized early, can undoubtedly be healed permanently, if not only the immediate treatment, but also the after treatment, is carried out carefully and conscientiously. That this can be actually expected in these cases has been shown in a large number of patients suffering from this condition.

But there are many of these cases which apparently recover only to relapse again and again. Many of these go from one physician to another, each time temporarily improving or recovering.

Robson has found that most cases which ultimately come to operation have been apparently cured a number of times and our observations fully confirm his report.

It is well to bear in mind this element of the history of any given case, because it should have a distinct bearing upon the choice of treatment in the future. Any case in which there has been a number of apparent cures with subsequent recurrence of the ulcer should properly receive surgical instead of medical treatment in the future.

Differential Diagnosis.—The most common condition which is mistaken for gastric ulcer is disease of the gall-bladder, especially gall-stones or sand. Next in order comes chronic appendicitis with acute exacerbation, during which the pain is usually referred to the region of the umbilicus. In this case the pain is lower down than in gastric ulcer, and it is increased upon pressure in the region of the appendix near McBurney's point.

Renal Calculus.—Has been mistaken for gastric ulcer. In this case the urinalysis will usually clear up the diagnosis; moreover, the pain is increased upon pressure over the kidney, and radiates downward and inward along the course of the ureter.

Duodenal Ulcer.—It is only the fact that ulcer of the duodenum is not very common which makes the occurrence of mistaking this condition for gastric ulcer somewhat infrequent. This condition has almost exactly the same symptoms as gastric ulcer, but the point of tenderness upon pressure is over the middle of the right hectus abdominus muscle above a transverse line drawn through the umbilicus.

Volvulus.—In rare cases, volvulus of the jejunum may be mistaken for gastric ulcer; but the violent vomiting containing bile soon after intestinal contents, but no blood, makes the differential diagnosis relatively easy.

Neurasthenia.—It is often very difficult to make a differential diagnosis between gastric disturbance due to neurasthenia and those due to chronic ulcer. This is especially true, because anemia, and inanition which is caused by the presence of a chronic ulcer.

It is quite likely that for several years to come, quite a number of patients suffering from neurasthenia due to other causes will be subjected to stomach operations as a result of erroneous diagnosis.

Any other severe intra-abdominal condition like intussusception, ruptured ectopic gestation, ovarian cyst with twisted pedicle, peritoneal adhesions, either septic or tuberculous, may be mistaken for gastric ulcer. In a few cases, I have seen an interesting condition which gave rise to a mistaken diagnosis of gastric ulcer. In these cases the great omentum had become attached by its free margin to some point in the lower portion of the abdominal cavity, the tubes, ovaries, uterus, bladder, the cecum, or the abdominal wall. The tension of the omentum upon the stomach gave rise to symptoms which could not be distinguished from gastric ulcer.

In a number of patients in whom we had made a diagnosis and the duodenum dilated to from 2 to 4 times its normal diameter down to a point below the entrance of the common duct. Upon exposing the jejunum this was found strongly contracted in these cases.

The lymph lodes near the duodenum in these cases were usually enlarged, indicating lesions of the mucous membranes lining the duodenum. In these the pancreas is usually also enlarged, and the gall-bladder is distended with bile together with mucus, sand or gall-stones, and frequently all of these substances are found in the same gall-bladder.

It seems reasonable to suppose that the obstruction at the point of entrance of the common duct into the duodenum or

below the point must be primarily physiological in character, due to the irritation caused by the mucus, sand or small stones in the gall-bladder and duct.

The observations of Cannon and Blake which show that there is a physiological mixing process which takes place in the duodenum is extremely interesting in connection with this particular class of cases. Continued attention to these cases is likely to develop facts which will have great interest for the clinician.

Another condition of clinical interest has been observed in a considerable number of cases. It has been found that many cases of gastric ulcer have previously suffered from chronic, recurrent, or catarrhal appendicitis, usually with peritoneal adhesions to the appendix, or the cecum, or both, or with fecal concretions in the appendix; but always with some form of obstruction to the passage of gas. This pathological obstruction has resulted in a physiological obstruction to the passage of gastro-intestinal contents through the pylorus, and this in turn had been the exciting cause of the gastric ulcer.

Clinically one can usually follow a very interesting sequence in cases of gastric ulcer which do not end abruptly by perforation or fatal hemorrhage, or by what is probably less frequent in cases in which the ulcer is at all advanced, by permanent healing.

At this point, however, I believe that it is proper to express the opinion that it seems most likely that a very large number of small ulcers heal so perfectly that it is quite impossible to demonstrate their existence either ante-mortem or post-mortem, and that there are few cases which go beyond this initial stage without healing which will later heal permanently.

Vicious Circle in the Development of Gastric Ulcer.—It is not uncommon to observe the following history in the development of gastric ulcer:

1st. There is severe pain two to four cm. below the ensiform cartilage in the median line. This may be more severe directly after eating, or only after eating certain things, or it may be most severe when the stomach is empty, and may be relieved by taking food, but its location is quite constant and the pain is increased upon pressure at this point. There is at this point no dilatation present.

2nd. In attempting to protect the ulcerated surface against traumatism there is a physiological obstruction of the pyloric sphincter. This obstruction may be increased in two ways: (*a*) There may be developed an indurated edematous area

due to the extension of the ulcer, or (*b*) as a result of the healing of the ulcer there may be formed a certain degree of cicatricial contraction which in itself will constitute an obstruction.

3rd. In order to overcome this obstruction the remaining portion of the stomach musculature will become hypertrophied.

4th. This is certain to be followed by muscular exhaustion and relaxation, and this will result in gastric dilatation.

5th. No sooner had this occurred, than the pyloric obstruction is still further increased by the fact that the lower margin of the greater curvature is depressed far below the level of the pylorus, and all of the food must not only be forced through the already obstructed pylorus, but it must also be elevated to the level of the latter aperture.

The fact that in the normal stomach every portion is drawn to a higher level than the pylorus, as the organ is forcing its contents into the intestine, has been shown very beautifully by Bettman, and more recently by Cannon.

6th. In the meantime, another condition has arisen which will prevent healing. The obstruction, together with the sacculation, gives rise to the accumulation of residual food in the dilated stomach, which undergoes decomposition in place of digestion. In this manner, all of the fresh food is vitiated by being mixed with the decomposed residual food remnants in the stomach. In this manner, each successive condition makes the previous state of things more grave. In the meantime, two other conditions have arisen which will serve to prevent the tendency of healing in the ulcer.

7th. Almost immediately after the beginning of a gastric ulcer, a great amount of mucus is secreted, apparently to protect the diseased surface. This, however, causes the food to become coated, and this in turn interferes with gastric digestion. This condition is followed gradually by the secretion of an increased amount of hydrochloric acid, which is undoubtedly the physiological remedy for facilitating the digestion of food covered with mucus. With the increasing acidity of the stomach contents, the chances of healing of the ulcer is greatly reduced, and its extension is practically certain, hence each one of the conditions in turn becomes more and more exaggerated, and conditions go from bad to worse, unless a radical change is established whether by internal treatment, or if this prove ineffective, by surgical operation. I have had an opportunity to verify these clinical observations in a very large number of patients suffering from gastric ulcer,

and they are in keeping with observations of most clinicians, who have studied such cases extensively. These facts would indicate the importance of careful treatment at the very beginning of gastric ulcer in order to secure complete healing before any of the secondary conditions have arisen, and also the necessity of eliminating all of the primary causes of the lesion in every individual case after healing has taken place, in order to prevent a possible recurrence.

This is especially important, because each successive attack is more difficult to relieve permanently. The chances for permanent relief are more and more reduced, because each time some lesion will remain, which must lessen the resistance of the tissues, or increase, at least, to a slight extent, the difficulty of emptying the stomach.

It is likely, that with proper after-treatment, especially as regards diet and general hygiene, it would be possible to reduce the number of cases of recurrence to a great extent. This would reduce the number of cases, which now properly fall into the domain of the surgeon.

Fuetterer has written most effectively upon this phase of the subject, and I am confident it is worthy of our most serious attention. This is true, primarily, because it would permanently eliminate all of the many serious sequelæ, which are now so common.

All of this would indicate that surgery of the stomach begins where internal and dietetic treatment of disease of this organ fails to give permanent relief. It also indicates that surgery, in order to be of value, must result in local rest and in the drainage of irritating contents of the stomach, in all non-malignant cases, and in the early removal of the growth in malignant cases. It seems reasonable to suppose that the most careful attention to diagnosis of non-malignant cases, and the surgical treatment of that portion of those which cannot be relieved permanently by internal treatment, must result in a vast reduction of the number of malignant cases.

At the present time some form of gastro-enterostomy seems to have given the most satisfactory results. Robson pointed out the fact, most emphatically, that the anastomosis must be located actually, and not only theoretically, at the lowest point in the stomach, in order to be safe and effective, and leave the patient free from regurgitant vomiting "Vicious circle."

Theoretically, there seem to be many arguments in favor of a posterior gastro-enterostomy, but practically the results

seem equally satisfactory, provided the opening is sufficiently large, and is in fact at the lowest point of the stomach.

A method has not yet been found which completely satisfies all reasonable demands for perforating gastro-enterostomy I have had the time to look up only those of my cases of stomach surgery, which I have treated in the Augustant Hospital, hence I will speak only of these in this paper. But the methods and the results have been the same in the cases I have treated in other hospitals, hence this is of no material importance. The following table will give a convenient idea of these operations:

	Total.	Recovery.	Died.
1. Incomplete Gastrectomy	5	4	1
2. Pylorectomy	9	8	1
3. Gastro-enterostomy, Murphy Button—			
Malignant Cases	24	16	8
Non-malignant	10	9	1
4. Gastro-enterostomy, McGraw Ligature—			
Malignant Cases	22	16	6
Non-malignant	65	59	6
5. Gastro-enterostomy, other methods	12	10	2
6. Perforated Gastric Ulcer	10	2	8
7. Gastrostomy	4	2	2
8. Exploratory Laparotomy for Carcinoma of Stomach	32	24	8
Total	193		
9. Ulcer of Stomach, not operated	66	60	6
10. Carcinoma of Stomach, not operated	49	..	15
Patients returned to their homes unimproved	34		

It will be seen from this that most of the operations were performed for the purpose of securing rest for the pyloric end of the stomach, and drainage for its cavity; also that gastro-enterostomy was performed oftener by means of the McGraw ligature than any other means. This method has been more satisfactory in my hands than any other up to the present time. I still follow the original direction of the author of the method, which I published in the *Journal of the American Medical Association,* June 6th, 1903. It seems likely that all of the methods now in use will be displaced by some new method which will be more nearly ideal than any now in use.

So far nothing has been said concerning the treatment of any of the sequelæ, or the complications of gastric ulcer, because it is to be hoped that these will be eliminated to a great extent in the future by the cure of the ulcer itself.

Complications.—The most common complications are perforation and hemorrhage.

Sequelae.—The sequelæ are: (1) Chronic ulcer, (2) stric-

ture of the pylorus, (3) gastric dilatation, (4) hour-glass stomach, (5) peritoneal adhesions, (6) inanition, (7) anemia, (8) neurasthenia resulting from the constant suffering, the malnutrition and the anemia, (9) carcinoma, and (10) jejunal ulcer following gastro-enterostomy.

Perforation.—The diagnosis of perforation is relatively simple. There is a history corresponding to that given for gastric ulcer above. During some exertion, the patient suddenly experiences severe pain in the region of the stomach. This is frequently attributed to the eating of a large meal, and may consequently be mistaken for acute gastritis. The pain becomes diffuse very suddenly. The patient is nauseated, and sometimes vomits blood or bile. The abdominal muscles become rigid, the patient is in a severely shocked condition.

The greatest point of tenderness is in the region in which tenderness existed previously. In many cases the liver dulness is obliterated to a greater or less extent, but it is not safe to place too much weight upon this symptom, because it frequently is present only after the perforation has existed for several hours, and if operation is postponed until this diagnosis can be confirmed by this symptom, the extent of the infection is usually so great that the operation cannot save the patient.

With two exceptions, all of my cases in this class were in this hopeless condition when they were admitted. The important point in connection with these cases is an early diagnosis and an immediate operation. The latter should consist in a free abdominal incision, careful sponging out of stomach contents wound in the stomach with Lembert sutures, preferable of silk or Pagenstecher thread. Drainage should always be used.

In cases in which the diagnosis is not made for twenty-four hours or longer after the perforation has taken place, it is difficult to state which course is the worst to pursue. In my own experience, all of the cases which came under my care in this advanced stage, which were operated, died within a few days, while a few which were not operated, recoverd, the opening in the stomach being closed by a plug of omentum. In some of these cases a subphrenic abscess developed, later requiring an operation.

I am confident, however, that these cases were all somewhat less serious from the beginning than those which were operated and died; and it would consequently not be proper to attribute the recovery of the former to non-operative treatment, and the death of the latter to the operation.

It seems proper to advise an immediate operation in all cases of perforated gastric ulcer, in which an early diagnosis is made, and to use one's judgment in each individual case of perforation, in which the diagnosis is not made early.

Gastric Hemorrhage.—A few years ago there was quite a marked tendency toward the immediate operation for gastric hemorrhage. Mayo Robson's experience in this direction was so encouraging, that quite a number of surgeons favored operative treatment for this condition. It seems, however, that this is quite unnecessary, because in almost every case the hemorrhage will cease, and if the patient is carefully treated, her general condition can be greatly improved, so that the risk of the operation itself will be much less than when performed during a hemorrhage.

The treatment should consist in exclusive rectal feeding. It may be well to administer from two to four ounces of castor oil early in the treatment, and then to place nothing whatever in the stomach, until there has been no blood in the evacuations for several days. Feeding by mouth should be begun with great caution, and as soon as the patient's general condition is good, the operation should be performed.

Sequelae.—In the treatment of the first three in the above list, (1) chronic ulcer, (2) stricture of pylorus, and (3) gastric dilatation, the method must be the same. It must consist of drainage of the stomach cavity by gastro-enterostomy, or in rare cases by Finney's pyloroplasty. The one point of greatest importance which must not be overlooked, is the choice of location for the opening in the stomach at its very lowest point.

Rodman's suggestion, advising the excision of the ulcer-bearing area in these cases, is undoubtedly worthy of consideration. In my own experience the results have been more satisfactory in cases in which I have excised the pylorus in connection with making a gastro-enterostomy, but as this adds another element of danger to the operation, it may be well to continue our observations before making this a routine treatment in these cases.

In cases in which a pylorectomy is not made at the same time, the gastro-enterostomy opening is likely to become partly or completely obstructed by contraction, and this may be followed by a recurrence of the ulcer. In cases in which a pylorectomy has been made, this has never occurred in my experience.

At the present time the choice of operation must lie between

the methods introduced by McGraw, that employed by Mikulicz, Moynihan's method, or the method developed by Robson-Murphy's oblong button; or Connel's suture method can be employed in connection with the methods of Mikulicz or Robson, but it seems likely that the button will continue to lose more and more of its old advocates while it is not likely to gain many new ones. This is true, especially, because with it the size of the opening is virtually limited, and there is a distinct objection in the minds of most surgeons against a non-absorbable foreign body.

The one great point in favor of the button is its ability to punch out an opening, and to leave the union between the stomach and the intestine with the slightest possible amount of connective tissue.

In order to be of any practical value this paper must point out some of the dangers to be avoided in surgery of the stomach.

Unnecessary Traumatism Should be Avoided.—There is great danger in unnecessary manipulation, because this increases the shock and the tendency to infection.

In all of these cases much can be done to prevent this by making an ample abdominal incision. Much time is frequently occupied in finding the jejunum, resulting in useless handling of viscera. By simply lifting out the transverse colon, and following its mesentery to a point a little to the left of the median line, one can always find the beginning of the jejunum in a few moments.

In gastrectomy and pylorectomy it is possible to reduce the manipulations to a minimum by simply grasping the four main arteries, and also the greater and lesser omenta between these four points, and then excising the intervening portion, which has been grasped by long-jawed forceps, in order to prevent leakage.

There is danger of necrosis of the stomach, if the gastric artery is injured, and of the transverse colon, if the middle colic artery is grasped in clamping the greater omentum.

In making a posterior gastro-enterostomy, there is danger of contraction of the opening in the mesocolon, unless the edges of this are sutured to the stomach.

There is always danger of angulation of the jejunum at its point of attachment to the stomach.

In all stomach operations it is well to have the patient placed in the sitting or semi-sitting posture, within a few hours after

the operation, in order to prevent hypostatic pneumonia, and to facilitate drainage of the stomach by gravitation.

The greatest danger after operation comes from acute gastric dilatation, but this can be remedied readily by introducing the stomach tube. If gastric lavage is employed, it is, however, important not to introduce a sufficient amount of solution to do harm by pressure. Half a pint at a time is quite enough water to introduce. It is a rule with us to make use of gastric lavage, whenever any patient is distressed after an operation upon the stomach.

In three cases in which gastro-enterostomy had been performed for the relief of pyloric obstruction in my series of cases the progress was perfectly normal for 3, 5 and 8 days, when the patient suddenly began to suffer from dyspnea. This continued for 6 to 12 hours, when the patients died. In the first two, an autopsy was not permitted. In the third it demonstrated the fact that the patient had died as the result of acute gastric dilatation.

We had previously had a number of similar experiences less severe in character, in which the dyspnea had subsided at once upon the use of gastric lavage, but it had not occurred to us that the distress was really due to acute gastric dilatation.

One would think it almost impossible for this condition to escape recognition, but the presence of the dressing over the abdomen, and the fact that the distress is referred to the chest, is almost certain to lead one astray, unless one's attention has been directed especially to the possibility of the occurrence of this condition. We have since observed this acute gastric dilatation to a greater or less degree in a number of cases, and have always been able to obtain prompt relief by the use of the stomach tube. Aside from the gas one always finds decomposing mucus and usually some old blood.

It is well to bear this possible condition constantly in mind in the after-treatment of these cases.

Feeding.—These patients should be given one ounce of one of the various predigested foods in three ounces of normal salt solution as a nutritive enema every four hours.

After the third day some of these predigested foods may be diluted in water and given by mouth, but the rectal feeding should be continued.

Later, broths and thin gruels may be given, but milk should not be given until quite late, as it is rather more likely to decompose than these predigested foods.

The patients may be permitted to chew steak, and to swallow the juice within a week after the operation.

Editorials.

TORONTO FREE HOSPITAL FOR CONSUMPTIVE POOR.

Dr. Charles Sheard, Medical Health Officer of Toronto, at the request of the Mayor and Board of Control, made an inspection of the Toronto Free Hospital for Consumptive Poor. He says that it is at present the only available institution which affords extensive accommodation for the consumptive poor of the City of Toronto. The Association in charge of the Hospital purchased forty acres of land near Weston upon which some new buildings have been erected, and others are in contemplation. There are in this Hospital at present thirty patients who have been sent in on city orders issued by Dr. Sheard. Most of these are bed-ridden consumptives, who have been refused admittance to other hospitals. Dr. Sheard goes on to state, that prior to the opening of this Hospital in September last, the situation regarding the care of consumptives in Toronto was somewhat acute, but such condition has been in great part removed by the accommodation afforded by the Weston Sanatorium. The expenses in connection with the maintenance of this institution are heavy, but the Hospital is being excellently worked and deserves liberal encouragement.

Mr. H. C. Hammond, the treasurer, has issued a circular in which he explains to some extent the position of matters. The City of Toronto contributes the usual 50 cents per diem for all patients sent in by the Medical Health Officer, and the Controllers have also made a grant of $2,000. The moneys thus acquired, however, pay only in a small part the full cost of maintenance. For a few of the patients their friends pay small amounts, but none are paying sufficient for full maintenance. The authorities have to depend chiefly upon the good-will and generosity of the people of Toronto to keep the doors of the Hospital open, and make it possible for them to further increase the accommodation. This work has been undertaken by the trustees with confidence that their fellow-citizens will co-operate with them in their endeavor to care for the consumptive poor of Toronto.

THE CANADIAN MEDICAL ASSOCIATION.

We learn from the President and Secretary that arrangements have been completed for the next meeting of the Canadian Medical Association, which will be held in Halifax, August 22nd to 24th, inclusive. Dr. John Stewart tells us that they have decided to work *hard* for three days, and on the fourth day to have an excursion to "the Land of Evangeline." we are pleased to learn that a goodly number from Ontario and the far West expect to attend the meeting.

Some of us derived much pleasure from attending a meeting in the same city twenty-four years ago. Halifax is a beautiful old city, and from a historical point of view one of the most interesting in Canada. It is situated, we understand, exactly 1,191 miles from Toronto. A variety of routes are open to intending visitors. One may travel all the way by rail, but the journey becomes tedious if one travels continuously. It is better to stop twice or thrice on the way and enjoy the scenery. After passing Montreal one may select Quebec, Cacouna, Rimouski, Metapedia, Moncton or many other points as stopping places on the way. The Valley of Metapedia and along the Restigouche, and the Bai de Chaleur presents to the eye some of the most beautiful displays of nature's grandeur.

To those who prefer more variety in travelling, other routes, of which there are many, will be preferable. Among these we may mention one which the writer enjoyed exceedingly twenty-four years ago: Boat from Toronto to Montreal, boat from Montreal to Pictou, rail from Pictou to Halifax, rail and boat from Halifax to St. John, boat from St. John to Boston, rail from Boston to Toronto.

Those who attended the meeting in 1881 will never forget the hospitality exhibited by the profession of Halifax. This was shown not only in the more public entertainments, but also in a pleasant and social way, by which the visitors were made very comfortable and to feel at home. As Dr. Canniff, the president of that year, expressed it: "Whether it was being carried to a secluded spot along the shore of the magnificent harbor—were one could take a delicious 'header' into the blue invit-

ing salt water—or out in the offing in the broad Atlantic swells, or behind a fast horse traversing the numerous and delightful roads through the splendid park, or in the club, or in the family circle, the Haligonians displayed the soul of friendship and good cheer."

ONTARIO MEDICAL ASSOCIATION.

The twenty-fifth annual meeting of the Ontario Medical Association was held in the Medical Building of the University of Toronto, Tuesday, Wednesday and Thursday, June 6, 7 and 8, under the Presidency of Dr. William Burt, of Paris. The meeting was a good one, being above the average as to the number present, and also the character of the papers presented. It unfortunately happened that many excellent papers were not followed by full and free discussions. It happened, however, that three of the discussions, one of which is mentioned on another page in this issue, were exceedingly interesting and instructive.

The presence of two distinguished visitors from the United States added much to the success and pleasure of the meeting. Dr. Oshsner's paper, of Chicago, was very interesting, and brought forth an excellent discussion, and exactly the same comments will apply to the address of Dr. W. B. Pritchard, of New York. Both of these doctors were well and favorably known to many practitioners of Ontario. It is perhaps needless to say that their reputation in this part of Canada has been greatly increased by the work they did in such a kind and courteous way at this meeting. In accordance with the custom of the last two years there was no division into sections. It seems rather a pity that a Medical Association so ambitious as that of Ontario should have to take such a retrograde step. We know of no large and prosperous society in any civilized country where division into sections is not considered an absolute necessity. No important changes of a business character were made. The most important of the suggestions, perhaps, last year was that the Ontario Medical Association should be-

come a branch of the British Medical Association. There is a general feeling that such a consummation would be very pleasant in many respects, but at the same time there is grave fear in the minds of the majority that it might interfere with the prosperity of the Association, especially in regard to the numbers in attendance at the meetings. The committee to whom the matter was referred reported adversely, and the amendment was not carried.

WE SHALL BE RESPONSIBLE.

The venerable Dr. Bredin, who has been in practice since the year 1845, came all the way from his home in Eastern Ontario, near Millbrook, to attend the Ontario Medical Association. He occupied a seat as usual in the front row of the audience, and raised his voice but once during the meeting. It was to some purpose that he spoke. Dr. C. J. O. Hastings had concluded his valuable paper on "The Condition of Ontario Children," which will be found elsewhere in this issue. Sir James Grant, of Ottawa, in a speech of great vigor had supported Dr. Hastings' position, and evinced a wide and thorough acquaintance with every phase of school hygiene and with the necessity for arousing ourselves to action in regard to it.

At this moment Dr. Bredin rose, and, leaning on his staff, said in a clear voice: "Mr. President, I am an old man. I have been in practice since the year 1845. I know the truth of what these gentlemen say, and if we do not act upon it, we shall be responsible."

These few words produced a deep impression on the audience, and it is probable that the success of the discussion which immediately followed was at least partly due to Dr. Bredin's effort. It was worth a good deal to all present to hear a voice from the farthest verge of professional life speak so well and wisely, and to know that one of the oldest members of the Association was as much alive as the youngest could be to a question of such importance in modern medicine.

BANQUET TO DR. O'REILLY.

Dr. Charles O'Reilly, former Superintendent of the Toronto General Hospital, was made the recipient of a testimonial, June 10th, when a hundred or more of his professional companions, and other friends, tendered him a banquet at the Albany Club. Dr. Adam Wright presided, and beside him were seated the guest of the evening and the Hon. J. J. Foy, Attorney-General of the Province. Others present were Dr. L. H. Barker, successor to Dr. Wm. Osler in the Chair of Medicine in the Johns Hopkins Hospital, Baltimore; Dr. Thomas Cullen, Professor of Obstetrics in the same University, both graduates of the University of Toronto; Drs. W. H. B. Aikins, Duncan Anderson, H. B. Anderson, Allen Baines, William Barnhardt, Mr. S. T. Bastedo, Drs. N. H. Beemer (Mimico), G. A. Bingham, C. Bird (Gananoque), E. J. Barrick, Wm. Britton, G. G. Boyd, H. A. Bruce, G. H. Burnham, W. P. Caven, Graham Chambers, G. S. Clelland, E. K. Cullen, J. M. Cotton, W. G. Collison (Lindsay), Mr. C. Cockshutt, Drs. J. L. Davison, C. R. Dickson, P. E. Doolittle, G. Elliott, J. E. Elliott,, F. Fenton, J. Ferguson, G. H. Field (Cobourg), J. T. Fotheringham, J. S. A. Graham, F. L. M. Grasett, J. B. Gullen, H. J. Hamilton, A. J. Harrington, A. O. Hastings, C. J. O. Hastings, W. B. Hendry, Mr. J. H. Horsey, Drs. R. M. Hillary (Aurora), H. S. Hutchison, C. Hodgetts, Samuel Johnston, A. J. Johnston, John S. King, Mr. Cecil King, Drs. A. A. Macdonald, T. B. Macdonald, G. R. McDonagh, H. A. McCullough, W. J. McCollum, D. N. Maclennan, D. McGillivray, Murray McFarlane, K. C. McIlwraith, Mr. John Massey, Drs. C. F. Murray, T. H. Middleborough (Owen Sound), R. T. Noble, Brefney O'Reilly, Gerald O'Reilly, H. C. Parsons, W. T. Parke (Woodstock), S. G. Parker, W. H. Pepler, A. Primrose, R. A. Reeve, J. F. W. Ross, B. L. Riordan, J. W. Rowntree, R. L. Stewart, S. Singer, E. W. Sprague, R. W. Bruce Smith, G. Silverthorn, G. B. Smith, J. A. Temple, Chas. Trow, T. S. Webster, T. Wylie, D. J. G. Wishart and Messrs. D. R. Wilkie and W. A. Wilson.

After the toast of the King, the Chairman proposed the toast of Dr. O'Reilly's only son, Dr. Brefney O'Reilly, who, in replying, expressed himself as being deeply sensitive of the kindness and good-feeling shown to his father. Dr. J. F. W. Ross, in proposing the health of Dr. Gerald O'Reilly, brother of Dr. Charles, said no man had done more to promote

good feeling among the members of the profession than their guest.

Speaking to the guest of the evening, Dr. John S. King said:

"I am indeed happy at this eventful period in the life of Dr. Chas. O'Reilly, to be permitted to give expression to a few of the many thoughts evolving regarding him; and to call up some of the reminiscences of him who has been my earliest preceptor—my Æsculapius—my friend.

"The birth of this fair Dominion on the 1st day of July, 1867, was marked by much rejoicing, and the inauguration of Dr. O'Reilly as Medical Superintendent of the Hamilton Hospital. At the time I entered the Hospital, a couple of years later, the Medical Superintendent organized a clinical class, and a junior medical and surgical house staff. Both class and staff were composed that summer of myself. Dr. O'Reilly at once became my preceptor, and few, indeed, there be among preceptors as painstaking in imparting practical knowledge, not only in his clinical work, but in the detailed instruction as to the wound dressing, bandaging, making fracture splints, compounding medicines, and everything connected with hospital work. He was himself a genius at making new and original devices for all manner of purposes.

"His exemplification of treatment of obstinate cases was most original and effective, as may be illustrated by one case, if I may be permitted by the Doctor to speak of it. It was a case of persistent hysteria, which had for nearly two years baffled the skill of the older physicians. The woman remained constantly in bed, and vowed she was unable to use her limbs. One day he was seen running into her ward with a pail of water, crying, 'Fire! fire!' and, stripping down the sheets, told the woman the place was on fire and to escape for her life, at the same moment emptying the water over her prostrate form. The aplication was sudden; so was her exit from the bed, and she made good speed into the corridor. She was cured.

"Another circumstance, which was somewhat exceptional even at that early period of the Doctor's experience. I may mention as characteristic of the man, was that of the amputation of the foot and lower third of the leg without the use of an anesthetic. The patient was himself a doctor, who objected to chloroform for personal reasons. This long antedated the Oslerized chloroform age limit. Preparations for the operation were effected by first filling a box with stone, to the lid of

which box the limb was securely strapped. The patient, meanwhile, was seated in a chair adjacent to the box, and braced his courage with a goblet of what was known in those days as 'Old 40 Rod,' and smoked a pipe of tobacco. The O'Reilly bandage—now called Esmarch's bandage—was employed to empty the limb of blood. The bandage was previously saturated with oxide of hydrogen. It will thus appear that the antiseptic treatment was unique, and besides being cheap, was always on tap. Result a bloodless amputation, satisfactory and complete. The amputated portion was preserved in a cool place until the recovery of the patient, when, with the help of my preceptor, the doctor dissected his own foot to decide what were the remote and proximate causes of the trouble.

"Another matter that differed then from now was the absence of fear from contagion. It was the custom of the preceptor and his pupil to go the rounds daily of the medical, surgical and small-pox wards, the latter patients occupying the old frame building on the grounds at the rear of the brick building. One diagnostic feature of the small-pox cases, as pointed out by my preceptor in his clinic to me, and which was verified in repeated cases, and which permanently impressed me with its value, was that this most disgusting contagious disease gave rise to a most fragrant and agreeable odor when the nose was brought near the pustules, which odor most nearly resembled that of the contents of a freshly-broken bumble-bees' honey-comb in the meadow in the summer time.

"Hours might easily be occupied in outlining interesting events of our friend's career, but time forbids, though I cannot refrain from citing one which might have prevented the possibility of this social gathering. Be it remembered that at the times alluded to our friend was a blushing bachelor; and being the disciple of this Æsculapius, and as such his friend, I occasionally accompanied him in his voyage to the northern shore of the most beautiful bay called Burlington, where resided a worthy lady destined to become, as she since became and continues, a partner in his joys and sorrows. On the particular occasion to which I refer his call was prolonged well into the evening—and so was mine at the Beach—which evening proved to be one of the darkest I ever remember. After my long wait I saw my preceptor's near approach, and found him equally anxious with myself, owing to the rapid approach of a threatening storm. By the aid of the electric flashlights we started our row-boat in the direction of the hospital on the opposite shore of the bay. Æsculapius sat at

the helm and his disciple plied the oars. When well on our way the storm broke into violence and fury. Heaven's artillery roared and electric pyrotechnics at swift following intervals enabled the helmsman to guide the tiny boat over the vast billows, which were rolling higher and higher every minute. We two mortals felt our time had come, and expected every moment to sink to a watery grave. Had it not been for his good judgment and discernment and correct work at the helm I would not have been able to tell you anything of the Doctor's early career; and if I had not made the most strenuous efforts at the oars till the shore was reached, you would not have had our mutual friend as guest here to-night; and free I am to confess before you all, and in which confession I doubt not he will join—that the joint toiling of each for both, and both for each, proved a bond of friendship never yet broken; and Heaven forbid that it should ever be. We landed safely, as you see, though fear turned my hairs to gray, and drove crimson blood into his, thus giving me the appearance of age, and him of youth, which, as you all must know, is a reverse of the true condition. This condition of his will be in his favor in seeking to avoid the chloroform age. But of reminiscence and of humor enough.

"Environment contributes greatly to education, and is a most important factor in the formation of character; and the aggregate of the diversified environment to which our friend was related during a period of over one-third of a century as Medical Superintedent, first of the Hamilton Hospital, where his natural qualifications, scholastic attainment, practical experience and professional lore had marked him a most suitable man to assume the responsibilities of a similar but more onerous position to which he was called, namely, that of Medical Superintendent of the largest hospital in the Province, in the Queen City of Toronto. The varied environments in the latter position during a period of thirty years must have occasioned a crucial test of strength of will, power of self-possession, of self-abnegation, resolution of purpose, and other attributes of a strong, well-balanced mind so necessary in one having to consider the varied interests of the trustees, the profession, the patients, the staff and the public. That he met their expectations, and merited their fullest confidence and appreciation, has been or is being proved in a marked degree.

"As the composite picture or aggregate of impressions of the several artists produces the true physiognomy and cranial

form of the individual, marking well each characteristic, so the constantly occurring, extensive, yet varied impressions received from the wise, experienced, skilled, cultured and fraternal in the medical and surgical world of the Province, continuous over more than one generation of time, must have created the ideal, composite, representative Doctor.

"And such ideal, permit me to say, in my humble judgment, is personified in the mentality, individuality, and professional lore of him whom we to-night in a social way seek to honor as our friend.

"As he now withdraws from the activities of a long-filled official position to enjoy a season of rest and enjoyment, he will carry with him our friendship and our best wishes that the afternoon of his life may, like the later, leafy days of June, be long, bright and cheerful."

Hon. Mr. Foy, in a brief address, said he had known Dr. O'Reilly very intimately for many years, of which he had none but pleasant memories.

Mr. D. R. Wilkie expressed himself as being glad of the opportunity of being present, and paid a high tribute to Dr. O'Reilly's personal worth and administrative abilities.

Dr. Thomas Cullen appreciated very much the privilege of responding for the house staff. He looked upon Dr. O'Reilly as his medical father, and referred to his lovable personal qualities and his distinguished abilities.

Dr. J. Algernon Temple proposed the health of the guest of the evening. He thought the honor was conferred upon him because he was perhaps the oldest friend Dr. O'Reilly had present in the room, their intimacy having extended over forty years. He compared the hospital of that period with the well-equipped hospital of to-day, and spoke of what Dr. O'Reilly had done to advance the interest of the profession and of the young men who had had the good fortune to serve under him.

Dr. Allen Baines then read an address expressing regret at the resignation of Dr. O'Reilly and asking the acceptance of some pieces of plate as a very slight token of good-will. On behalf of the subscribers, the address was signed by J. Algernon Temple, Allen Baines, H. J. Hamilton, J. O. Orr, A. H. Wright, W. H. B. Aikins, Bruce L. Riordan, James F. W. Ross and Samuel Johnston.

Dr. Barker, of Baltimore, was then called upon. He looked back with pleasure to his year on the house staff of the Toronto General Hospital, and remembered with much appreciation the great kindness which Dr. O'Reilly had shown to himself

and the other members of the house staff. He was sure every man who had ever served in the Toronto General Hospital felt a deep sense of gratitude to Dr. O'Reilly for his unvarying kindness.

Dr. Adam Wright presented the solid silver gift, and read a telegram of regret for absence from the Hon. Senator Sullivan, of Kingston. "Toronto Hospital," he wired, "was a monument of Dr. O'Reilly's reforming genius and love of humanity."

Dr. O'Reilly received a perfect ovation on rising to respond. He thanked all present for the magnificent banquet, and the absentees for their cables, wires, letters and messages, and was glad to see so many of his ex-house staff present. He had come to Toronto on January 1st, 1876, at the request of the Board, all of whom—C. S. Ross (Chairman), W. T. O'Reilly, Thomas McCrosson, Wm. Elliott and W. H. Howland—had since slipped away. Judge Patterson and Walter S. Lee had also joined the great majority. The medical staff then consisted of Drs. W. T. Aikins, H. H. Wright, Bethune, Hodder, Graham, Thorburn, Geikie, Richardson, Cartwright, Cassidy, Reeve and Temple. The last five were all alive, and some of them present.

"I was at Dr. Hodder's last operation and at Dr. Grasett's first operation, he being the youngest surgeon on the staff at that time, and glad I am to see him here to-night as senior surgeon of the hospital. My first two house surgeons were Drs. Fisher and McArton, then fourth-year students, and my two first graduates were Dr. Langstaff and Dr. Stark, both alive to-day. I cannot be accused of being a 'rolling stone,' as I have only lived, in all my life, in my father's house and in the hospitals of Hamilton and Toronto.

"I am not saying good-bye, but only good-day, and may we all have many happy years. Let us keep young by associating with each other oftener than we do, and with the younger members of the profession like ourselves, for the vitality of youth is very contagious, and will carry us over the chloroform period. The very idea of knowing that I am surrounded by over a hundred friends to-night makes it hard indeed for me to put into words the feelings which I should like to express. I shall conclude by saying how sincerely Mrs. O'Reilly, my son and myself appreciate this magnificent ovation, your expressions of kindly feeling and your handsome present, and by thanking you for all you have done and said for 'me and mine.'"

MEDICAL ITEMS.

Medical men who will attend the annual meeting of the Canadian Medical Association at Halifax, N.S., August 22nd to 25th, are requested to communicate, as soon as possible, with C. Dickie Murray, M.B., Chairman of the Information and Lodgings Bureau, 66 Queen St., Halifax, with a view to securing hotel accommodation in advance. The hotel rates vary from $1.50 to $3.00 per day.

We learn from the New York Medical Journal that Dr. Thomas Addis Emmett was honored on his 67th birthday on May 29th at a dinner given at Delmonico's by his medical friends. About one hundred and twenty-five guests were present. Dr. Emmett was escorted to the dinner by Archbishop Farley, who in a brief speech said: "I never felt more of a layman than I do at this dinner given to the eminent physician, Dr. Emmett; honor is due to him who stands at the head of the medical profession; what he has achieved in literature, medicine and surgery is more than sufficient for any one man; he has lifted up for himself a monument of work that will stand long when he is in his grave."

Dr. E. C. Dudley, of Chicago, made an address of introduction. Among others who spoke were Drs. W. M. Polk, Geo. T. Harrison and F. J. Quinlin, of New Pork, Dr. W. H. Baker, of Boston, and Dr. S. C. Gordon, of Portland, Maine. In the different speeches the various phases of Dr. Emmett's activities were specified, especially his career as a surgeon, his contribution as to history and his achievements in art.

Obituary.

EDGAR MACKLIN, M.D.

Dr. Macklin, of London, Ont., died at his home in that city, May 30th. He graduated M.D. from the Western University, London, and for a time acted as surgeon on an Allan Line steamship. After giving up that position he practiced for a number of years in London.

Personals.

Dr. Chas. O'Reilly sailed from Montreal for London, England, June 30th.

Dr. Jos. W. Lesslie, of Toronto, returned from a visit to England, June 20th.

Dr. C. W. Freeman has resigned from the position of Superintendent of Hamilton City Hospital.

Professor Ramsay Wright, of the University of Toronto, is spending the summer in Greece, Europe.

Dr. A. Primrose, of Toronto, left on his second trip to Edmonton, N.W.T., to attend the King murder trial.

Dr. Jos. W. Rountree has been temporarily appointed to act as Medical Superintendent of the Toronto General Hospital.

Dr. Duncan Neil Maclellan, of 126 Bloor Street west, Toronto, was married to Miss Marion Clemesha, daughter of Mr. Clemesha, of Port Hope, June 14th.

Dr. Edmund E. King, of Toronto, who has been travelling for the last two months in England and on the Continent, returned home, June 27th, and has resumed practice.

Dr. Arthur B. Wright, who for the last two months has been attending the Clinics of Cocher in Berne and Roux of Lausanne, Switzerland, expects to return to London, England, early in July.

Dr. Graham Chambers wishes to inform the members of the medical profession that he has given up general practice, and will devote himself to consultation work in internal medicine and diseases of the skin.

Dr. J. Orlando Orr spent the last week of May in New York where he procured several special attractions for the Toronto Industrial Exhibition. After his return to Toronto he received a letter from Lord Strathcona who stated that he had received a letter from Mr. F. R. Fawlke, director of the South Kensington Museum, who said that in reply to an application from the managers of the Industrial Exhibition the following oil paintings will, be loaned for next fall, Battle of Waterloo and Battle of Fontenay, by Phillappteaux; and also reproductions of plate belonging to the Royal collections.

Correspondence.

THE APPOINTMENT OF A MINISTER OF HEALTH.

To the Editor of The Canadian Practitioner and Review.

Dear Sir:

Dr. Hodgetts, at the recent meeting of the Ontario Medical Association, read a paper entitled, "A Plea for a Provincial Minister of Health." I was unable to be present when the paper was read, but when the committee which had been appointed to consider this suggestion brought in its report asking the Association for an endorsation of it, I moved that the report be not received, giving very briefly some objections to it. These objections were endorsed by several speakers and by a vote of the Association.

The question raised by Dr. Hodgetts' paper is a very important one from at least two standpoints. These can be briefly summarized under two heads:

1. Is there any necessity for a Provincial Minister of Health?

2. Is it wise for the Ontario Medical Association to even introduce any question that might divide its members into rival political factions?

In answer to the first question, it can be asserted as an indisputable fact that the present Provincial Secretary is, as all his predecessors have been, quite capable of fully understanding and efficiently dealing with any matters pertaining to the public health. He is, under present conditions, absolutely free to select a Board of Health, or a commission, from the very best men in the whole Province, whereas a Minister of Health would, of necessity, be chosen from one party; and party exigencies would narrow the selection to one of its leaders.

The work of a non-partisan commission or Board would be considered by the Legislature on its merits, whereas the work of a Minister would always incite fierce party criticism. The work of the former would be continuous; the work of a Minister, in so far as he was concerned, would abruptly end with the defeat of the party. No Minister could do more or better work than is being done by Dr. Bryce, Dr. Hodgetts, and the Provincial Board of Health. The cost to the country

would be enormously increased by this change, without any corresponding benefit. In fact, there would be, in all probability, demoralization, instead of improvement, in all matters pertaining to public health.

Again, the character of the work does not demand a Minister and a special policy. The Legislature, which by the way, contains a fair proportion of able medical men, enacts certain regulations pertaining to the management of all such institutions as would come under a Minister of Health. If the Government appoint the right kind of officials, there is no reason why these institutions should not be run efficiently. If they are not, it is the fault of these officials, who should be promptly changed, if found negligent, and not the system changed for one far more expensive, inefficient and meddlesome. Dr. Hodgetts has not given us a single department in this whole field where competent officials could not do the work satisfactorily. Enough has been said to prove that there is absolutely no need for the Ontario Medical Association to take any such step as Dr. Hodgetts suggests in his paper.

II.

Is it wise for the Ontario Medical Association to even introduce any question that might divide its members into rival political factions?

I am not one of those who take the narrow view that the medical society, medical press and medical practitioner should consider scientific work alone, the very "Ultima Thule" of its, or his, existence. It is quite true that scientific or strictly professional work should, and does, imperiously exact a very large share of a doctor's time and energy, yet the demands of his life and his citizenship pre-empt the first claim, not only on his time and energy, but on all that he hath, for knowledge and skill alone can only make a good type of machine, never a high type of man. It is, therefore, quite within the province of the Ontario Medical Association to discuss a variety of subjects, and this brings up for consideration the character of Dr. Hodgetts' proposition. Is it such, that all our members, irrespective of their party leanings, could see "eye to eye," as being one of universal beneficence, or is it not, rather, one that simulates so very palpably a "plank" in a party platform as to at once arouse party suspicions? How are we to distinguish the appointment of a Minister of Health from, say the straight party announce-

ment of a Minister of Mines, or how could the medical electorate differentiate between these two Ministers at election times, when both are equally clamorous for the same party vote? The members of the Ontario Medical Association are probably pretty evenly divided as to party politics, and no other body, outside of the Legislature itself, contains a larger proportion of active, strong party men. To assure myself of what effect Dr. Hodgetts' proposition would have, I discussed it with three or four men on each side of politics. These approved or disapproved of it on strictly party lines. This evidence is quite sufficient to forbid the Doctor's proposition from being ever brought up in the Association. The Doctor's lack of any experience in party warfare can be generously accepted as a sufficient excuse for the mistake he made in introducing any such question, and the Presidents—past and elect—as well as every member of the Association, must feel very thankful that this bone of contention has been so very quietly and deeply buried out of sight.

Yours truly,

JOHN HUNTER.

Book Reviews.

Harrington's Practical Hygiene. A Treatise on Hygiene and Sanitation. For Students, Practitioners, Health Officers, etc. By CHARLES HARRINGTON, M.D., Assistant Professor of Hygiene in Harvard University Medical School, Boston. New (3rd) edition, thoroughly revised. In one octavo volume of 793 pages, with 118 engravings and 12 plates. Cloth, $4.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

No department in the realm of medicine approaches in importance hygiene and sanitation—the science and art of conserving the health, energy, wealth and welfare of the individual and of the community. An authoritative book, covering the entire subject clearly and comprehensively, is therefore an essential to the full execution of professional responsibilities. Dr. Harrington's work was accepted as the authority upon the appearance of its first edition. He treats his subject broadly and with careful attention to details, his purpose being to furnish a clear, complete, well-illustrated volume, equally adapted to the needs of the student, practitioner and health officer. The success of the work is well shown in the demand which has exhausted two large editions in less than four years. As the succeeding editions are called for, the author, by careful revision, elision of obsolete matter and addition of new, keeps his work well abreast of the advances in a subject by no means stagnant. The new section on infection, susceptibility and immunity will prove a valuable and interesting feature of the present edition. Evidences of searchng revision will be found throughout the book, the alterations and additions necessitating a considerable increase in both text and illustrations, although the price remains at its previous very moderate figure.

A Text-Book of Obstetrics, By ADAM H. WRIGHT, M.D., M.R.C.S,, Eng. Professor of Obstetrics, University of Toronto; Obstetrician and Gynaecologist to the General Hospital, Toronto, Canada. With two hundred and twenty-four illustrations in the text. New York and London: D. Appleton & Company, Publishers. Toronto: N. Morang & Co. Price, $4.50.

To the medical practitioners of this country, Dr. Adam H. Wright needs no introduction, as few members of the profession are better or more favorably known. The reviewer's acquaintanceship with him extends over a period of thirty years as teacher, colleague and friend; and these many years have given abundant proof of the thorough manner in which Dr. Wright performs all his work. But this is not the occasion for personal reminiscences. Our duty is that of examining his work on obstetrics.

On many occasions, and for many years, Dr. Wright has

been a contributor to obstetric literature, and has frequently read papers upon his chosen field of work before medical gatherings. It is needless to say that on no occasion did he fall below, but rather rose above, the high expectations formed in advance regarding what he might have to say. The work before us is the outcome of long years of close study and extensive experience, the best uses of both having been made by his sound judgment and honest purpose.

The subject matter of the book has been divided into physiological obstetrics and pathological obstetrics. In the first section the author deals with anatomy, physiology, the embryo and fetus, pregnancy, physiology of labor, the management of normal labor, the puerperal state and abnormal presentations. The second part of the book discusses diseases of pregnancy, intercurrent diseases of pregnancy, diseases of pregnancy and the puerperium, ectopic pregnancy, hemorrhages, miscarriage, prolonged and precipitate labors, abnormal conditions of the uterus and mammary glands, insanity, antiseptics and infection, deformities of the pelvis, and obstetric operations both minor and major.

This is a full catalogue of diseases and conditions, and furnishes plenty of text matter for a most exhaustive study of the subject of obstetrics. Chapter by chapter we have reviewed this book, with a steadily growing appreciation of its contents. We have here in moderate space—the book does not quite run to six hundred pages—the very best to be found in the whole range of the science and art of obstetrics. But, in addition to the excellence of the subject matter, a generous word of praise can be said as to the form in which it is given to the reader: Dr. Wright commands a fine style. On these counts of matter and form this book complies fully with Kant's tests for the merit of all books.

Naturally enough the reader will instinctively turn to the more difficult portions of the subject of obstetrics. It is in the handling of such topics as tuberculosis and cardiac diseases in connection with pregnancy, ectopic gestation, eclampsia, albuminuria, septicemia, troublesome miscarriages, etc., that the real strength of the author appears. We do not hesitate to state that the advice contained in this book upon these subjects will be found to be the very best available anywhere.

The publishers have done their part well, and have produced a very handsome volume. We bespeak for this work on obstetrics a very extensive sale, and will venture the opinion that, of the various books on the possessors' shelves, none will be taken down more frequently nor more profitably for perusal

than this "Text-book of Obstetrics," by Professor Adam Wright.

The words of the famous Samuel Johnson about Oliver Goldsmith may fittingly be applied to Dr. Wright and his book: *Nihil est quod non tetigit; nihil quod tetigit non arnavit* —he has touched upon everything, and all he has touched he has adorned. JOHN FERGUSON.

Mucous Membranes, Normal and Abnormal, including mucin and malignancy. WM. STUART-LOW, F.R.C.S., London. Bailliere, Tindal & Cox.

This small volume embodies the author's opinions on the importance of mucin in the animal economy, and his practical application of his theories to the treatment of diseases in which the mucous membrane is impaired. His views are well known in America from articles he has written from time to time in the various journals.

Lea's Series of Medical Epitomes. Edited by VICTOR C. PEDERSEN, M.D.

Arneill's Epitome of Clinical Diagnosis and Uranalysis. A Manual for Students and Practitioners. By JAMES R. ARNEILL, A.B., M.D., Professor of Medicine and Clinical Medicine in the University of Colorado, Physician to the County Hospital and to St. Joseph's Hospital, Denver. In one 12mo volume of 244 pages, with 79 engravings and a colored plate. Cloth, $1.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

Lea's Series of Medical Epitomes will comprise twenty-two volumes, of which this is the seventeenth. The volumes are so uniformly excellent, modern and trustworthy, and so well adapted to the needs of students and to preparation for college and State Board examinations that they have practically monopolized the entire "compend" market.

Dr. Arneill has furnished a work that is a fit companion to the others of this series.

It contains an enormous amount of up-to-date information on laboratory investigations and clinical diagnosis, skilfully condensed, simply and clearly stated. As might be expected, the sections on the blood and urine are very full, but sufficient consideration is also given to the examination of stomach contents, feces, sputum, many bacilli, cerebro-spinal fluid, milk, etc.

In every line the book is practical, the author never losing sight of the fact that it is intended for the student of medicine and for the practitioner who may not have acquired the ability to put into practice the laboratory methods which so surely lead to precise and correct diagnosis.

An attempt is successfully made to explain fully the most important tests and procedures, and the author very happily anticipates the mistakes and difficulties of the inexperienced worker. Illustrations are freely used wherever they can help to a better understanding of the text.

Miscellaneous.

Beer-Drinkers' Heart.

Georg Keferstein (*Zeit. für Diat. und Phys. Therap.*) discusses the effect upon the heart of drinking large quantities of fluids, and especially deals with the question of how far the so-called "beer-drinkers' heart" is caused by the alcohol in the beer and how far it is a mere mechanical effect of the quantity of fluid taken in. His view that the toxic effect of the alcohol is the main cause, to which other causes are only secondary, has been combated by Hueppe, who cites the occurrence of an exactly similar heart condition in excessive tea drinkers in Russia in support of the theory that the amount of fluid rather than the nature of the fluid is the harmful factor. Tea, however, may itself exert a toxic influence, and in favor of Keferstein's view is an observation of Aufrecht, who found that spirit drinkers also suffered from similar heart lesions. Certain authors have held that a plethora vera or increase in the total amount of blood in the body without change in its composition may result in part from drinking large quantities of fluid, and that such a plethora must throw more work upon the heart. Keferstein does not admit that the existence of plethora vera has been demonstrated, for we have no direct method of estimating the total quantity of blood in the body. Of the writers who describe the condition most appear to consider it the result of over-feeding, in addition to over-drinking. When occurring in combination with over-feeding, if we suppose that the need of the body for nutrition is increased and that all metalobic processes are more active than normal, the work of the heart will undoubtedly be increased, but not now by any mere mechanical process. Apart from such a supposition, it seems impossible that plethora vera can mechanically increase the work of the heart. The need of the tissues for nutrition being unaltered, the flow of blood through the capillaries will not be increased, and the only effect of the condition will be an accumulation of blood in the most distensible part of the vascular system, that is, in the veins. The condition of plethora serosa or of increase in the fluid constituents of the blood is radically different. Since the number of cells in any given mass of blood is diminished, a greater mass of blood than before must pass through the capillaries in a given time in order to sustain the nutrition of the tissues, and if other conditions are supposed constant, the heart must work harder to bring this about. On the other hand, the viscosity and cohesion of the blood being diminished, the friction with the vessel wall will be diminished and the work of the heart to this extent lessened. Both these factors act together, and we have no method of estimating the total result on the work done by the heart.

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Original Communications.

SOME CONCLUSIONS BASED ON OVER FOUR HUNDRED OPERATIONS FOR APPENDICITIS.

BY HERBERT A. BRUCE, M.D., F.R.C.S. (ENG.),

Associate Professor of Clinical Surgery, University of Toronto; Surgeon to St. Michael's Hospital; Surgeon to Emergency Hospital; Assistant Surgeon to the General Hospital.

It is not my intention to give a tabulated report of these cases, as I do not think any useful purpose can be served thereby, but I shall refer to certain cases to support my contentions. I might say that the first operation was performed by me on October 5th, 1897, and the four-hundreth on February 25th, 1905. My apology for taking up this somewhat hackneyed subject is that I have observed a good deal of confusion in the minds of general practitioners as to the best time for operation, and an insufficient conviction of the importance of a very early operation in all acute cases. I am glad to see that Dr. Wm. Osler, in the latest edition of his book, classes appendicitis as a surgical disease, as, indeed, do a very large number of eminent physicians.

I should first like to mention the symptoms of appendicitis.

1. Pain in the abdomen occurring suddenly and usually of a colicky character in a patient in ordinary health.

2. Nausea or vomiting within a few hours.

3. General abdominal tenderness most marked on the right side.

4. Elevation of temperature; this however, usually does not occur for some hours or it may not be elevated for twenty-four hours. The symptoms will occur in the above order, and a diagnosis in the vast majority of cases should not be difficult.

In the course of a few hours the pain will become localized to the region of the appendix and there will then be rigidity of the right rectus over this area. A diagnosis should be made in the majority of cases within twenty-four hours.

The most important of these symptoms is the pain, and when it is very severe in character is usually indicative of a serious form of the disease. The pain usually subsides gradually, but when it subsides suddenly, within the first thirty-six hours, it is of serious import and may be due to gangrene of the appendix, rupture of the appendiceal wall, or to infectious material passing from the appendix into the cæcum.

Secondary pain, that coming on after the first thirty-six hours, is not of a colicky but an inflammatory type, and is due to the involvement of the structures around the appendix. Severe pain after the primary subsidence of pain, is generally due to the beginning of peritonitis from perforation.

As regards temperature—it may be two or three degrees above normal, but I have had several cases in which the temperature was never above one hundred and yet found a gangrenous appendix at operation. After the initial rise of two or three degrees it may drop to ninety-nine or even normal where the appendix has become gangrenous: therefore, the temperature is not a reliable guide as to the condition of the patient.

As to pulse—it is generally increased in frequency, but it is of little or no value in making a diagnosis.

I would now like to make brief reference to some of my cases. I have operated on two-hundred cases in the interval without a death. In another two hundred cases the operation has been done during the acute attack and at periods varying from twelve hours from the beginning of the attack to three weeks and in one instance five months. In this series I have had in all fourteen deaths, *i. e.*, a mortality of seven per cent. In eleven of these cases there was general septic peritonitis, and one of them had been ailing for five months and was thought to be suffering from typhoid fever. When I operated on her, quite half the abdomen was filled with pus and she was suffering from septicemia. After the evacuation of four or five quarts of pus she improved somewhat, but lived only about a month. This case would probably have been saved if the diagnosis had been made even within the first month.

Case 2—The patient had been ailing for three weeks with what was supposed to be typhoid fever, but eventually a mass appeared in the abdomen, and he was sent into the hospital under my care. His tongue was dry, brown and thickly coated, and he had a very fetid breath, temperature 104, pulse 130, with a large swelling on the right side of abdomen. He was too weak to take a general anesthetic, so I opened with Schleich's solution of cocaine and evacuated about two quarts of pus. He

improved somewhat for two weeks and then developed a subphrenic abscess which I opened and drained. Later he developed an ab-cess of the lung and succumbed.

Case 3—The patient had been ailing for eighteen hours before the operation. He had intense pain, but his temperature at the time of operation was only one hun red, pulse ninety. I found a gangrenous appendix, perforated, and diffuse septic peritonitis. A portion of the omentum as large as one's hand was also gangrenous. He died in about three days.

Case 4—Patient ill thirty-six hours with usual acute symptoms. At operation found diffuse purulent peritonitis, with a gangrenous appendix. The peritoneum had a blistered appearance due to infection with the streptococcus. The cavity was flushed out and drained, and the patient did well for five days, then a misaarriage occurred of a two months pregnancy, and she died two days later.

Case 5—Had been ill three days with a severe attack resulting in a localized abscess, the abscess was opened and a gangrenous appendix removed, by simply throwing a ligature around its base where it was healthy. Four days later the patient became jaundiced and died in three weeks from pyle-phlebitis. A post-mortem showed multiple abscesses in the liver.

Case 6—The patient had been ill eight days; there was a large localized mass with severe symptoms of septicemia. The pus was evacuated and drainage provided, but the patient died of septicemia in about a week.

The eight remaining cases had been ill with general purulent peritonitis for from seven to ten days before operation. Of the cases which recovered I have had ten cases of general purulent peritonitis, and in one a septic thrombosis of the femoral vein followed by pulmonary embolism with recovery.

I would like to refer to one of these cases of recovery, after diffuse purulent peritonitis—a boy of fourteen years of age. He had been ill for a week, with high temperature and rapid pulse. When I saw him, the abdomen was distended, hard, and tender all over; temperature 103½, pulse 160, and very weak, with constant vomiting. I told the friends that I would not advise an operation, as he seemed to be in a dying condition. At their urgent request and that of the attending physician, an operation was done during the night in a farm house. There was a large quantity of pus evacuated, and a gangrenous appendix removed. The cavity was washed out with saline and drained with iodoform gauze. Exclusive saline enemata were used for three days. He made a perfect recovery.

Of all the fatal cases only two were operated upon within the first forty-eight hours, one of them within twenty-four hours. A large number of these successful cases were operated upon within the first two days.

As to time for operative intervention: There is no question in my mind that the most favorable time for operation is within the first twenty-four hours of the attack, or if this is not possible, within the first forty-eight hours, that is to say, before perforation occurs and infection of the tissues around the appendix. In some cases perforation has occurred earlier than this, but in the majority of cases it will not. The danger of operation prior to perforation or infection of the tissues and peritoneum is practically no more than that of an exploratory laparotomy. Drainage would not be required, and the abdomen would be closed and the patient well within two or three weeks. I think the majority of surgeons now agree with the early operation. There is a difference of opinion, however, about the operation during the spreading inflammatory process, say from the second to fifth day. My opinion is that it is wise to operate at this time, but the operation must be a limited one, that is, simply opening the abdomen, letting out the pus, removing the appendix, if it be accessible, and drainage. We find in many cases in this stage a localized mass containing pus. An incision can be made over this mass, and if the abscess is parietal, that is, adherent to the parietal peritoneum, it can be opened without opening the general peritoneal cavity. If, on the other hand, the mass is not adherent to the parietal peritoneum and the general cavity has to be opened to reach it, the latter can be completely shut off by using gauze sponges or strips of iodoform gauze before opening the abscess. The abscess can then be opened by breaking through the exudate which forms its outer wall, with the finger. When pus is reached it should be mopped out with gauze. Very frequently then the appendix can be found, a ligature thrown around its base and removed. If it is not easily found it should not be too vigorously searched for, as this might cause the breaking down of adhesions and carrying infection into the general peritoneal cavity. An experienced operator will usually without danger be able to find and remove the appendix. A perforated rubber tube and iodoform gauze should be placed in the abscess cavity, and the gauze which was used for walling off the general peritoneal cavity left in situ for several days.

As to operation in the period of subsidence of the inflammatory process from the fifth to seventh day on. I think, undoubtedly that here an operation should be done, the pus evacuated, and the appendix removed where it can be reached, and drainage provided. Operation in this stage is not so urgent as in the first and second, but by retaining the products of infection there is always an element of danger. Lastly, if an operation has not been done during the attack, it should certainly be done during the interval to prevent recurrence of the attack and relieve the patient of the effects of the pathological changes which have

occurred. The appendix can be removed in this stage without danger.

The suppurative cases might be divided as follows:

1. Gangrenous or perforated appendix with a small amount of pus lying free in the cavity.

2. An abscess below or to the outer side of the cæcum and beneath the anterior parietal peritoneum.

3. An abscess circumscribed around the cæcum either below or to the inner side.

4. Pus diffused through the general peritoneal cavity.

All of these cases will require drainage, and in the first three the general cavity can be thoroughly walled off without any fear of infection.

In cases of appendicitis, associated with diffuse purulent peritonitis, the question of flushing out the abdomen is an important one. Murphy and Deaver hold that it should never be done, while Kelly and others describe complicated technique for its performance. Personally, I have had successful results from both plans of treatment, and do not feel in a position to state which is the correct treatment. In cases where there is a large amount of pus without any lymph or limiting adhesions, I would wash out with normal saline solution. In cases where there are one or more collections of pus more or less walled off, mopping out with sponges and drainage is all that should be done; or where the patient is suffering intensely and showing marked constitutional depression, I would simply open and drain without washing out the cavity. There is no doubt that in many cases where there is a large collection of pus, and it would seem that there was general peritonitis, that really the whole cavity is not involved, especially if the pus is thick, and in these cases washing out would be injurious by spreading infection to the healthy peritoneum.

To sum up then, I have arrived at the following conclusions:

1. In every case of acute appendicitis it is the duty of the physician who first sees the case to ask for a consultation with a surgeon. The responsibility of saying when the operation should be done should rest with the surgeon.

2. Until a positive diagnosis is made and the surgeon sees the case, opium should not be given for the relief of pain.

3. If a surgeon can be had at the beginning of the attack so much the better for the patient, and the operation should be done then. In other words, I very strongly advise in all cases of acute appendicitis immediate operation as soon as the diagnosis is made, unless there is some complication contra indicating it.

4. That in the event of not being able to secure a competent surgeon the patient should be treated by exclusive rectal alimentation. The stomach should first be washed out so as to remove all decomposing matter, then absolutely nothing should

be given by the mouth. From one-half ounce to one ounce of some concentrated pre-digested meat extracts, with six ounces of salt solution every four hours, given by the bowel. An ice bag or leaches applied over the appendix to relieve the pain.

This treatment can also be given in cases where the patient is too ill to give any promise of relief by operation.

5. While making a diagnosis and after it is made, until a surgeon can be had, exclusive rectal feeding should be resorted to.

After the operation, in all these acute cases, I am in the habit of using exclusive rectal feeding for at least two days and often for a longer period. In most cases only normal saline is used, but if the patient is very exhausted, feeding with meat extract added to the saline is used. The patient will complain very little of thirst after the first twenty-four hours.

64 Bloor Street East, Toronto, Ont.

ABNORMAL REFRACTION AND EYE-STRAIN.

By G. HERBERT BURNHAM, M.D., F.R.C.S., Edin.,
Professor of Ophthalmology and Otology at the University of Toronto, etc.

The emmetropic, that is, the normal eye, produces a distinct image of external objects on the retina, particularly that portion of it situated at the posterior extremity of the visual axis, *i.e.*, the yellow spot region.

The formation of the image is accomplished by the cornea, crystalline lens, aqueous and vitreous humors. The cornea is the principal lens when the eye is at rest, as it separates two media with the greatest difference in density, and therefore has a higher refractory power than the crystalline lens. But the crystalline lens possesses the important function of accommodation, and approaches during the maximum of this function to the refractive power of the cornea. In order to form a distinct retinal image it is necessary that the curvature of the meridians should be symmetrical. Any departure from this produces variations in their refractive power.

The emmetropic eye has a range of vision from infinity to its near point. No glass improves distant vision, and spectacles are not required for reading until the age of forty-five or fifty years is reached.

Emmetropia, in the strict sense of the term, is the condition midway between hyperopia and myopia; and its title of normal refraction is denied, as it is not common to find people absolutely emmetropic.

One of the most important points in the treatment of eye diseases is to restore the eye to a condition of emmetropia by suitable glasses.

Errors of refraction lie at the root of 50 per cent. or more of all *diseases* of the eye.

Ametropia is any departure from emmetropia or perfect focussing. The principal focus is not a point, nor does it lie in the retina.

Ametropia is of three kinds. In the first class the eye is too weak or the axis is too short, so that the principal focus of the eye falls beyond, *i.e.*, behind the retina. This is termed hyperopia or far-sightedness.

In the second class, the refractive power of the eye is too strong or the axis of the eye is too long, causing the principal focus to fall in front of the retina. This is termed myopia, or near-sightedness.

The third class comprises astigmatism.

Hyperopia is nearly always congenital, and nearly all eyes are hyperopic at birth. The eyeball increases in length with the development of the rest of the body, and hyperopia diminishes with emmetropia, or more rarely into myopia.

Myopia is that form of ametropia in which the retina lies back of the principal focus of the eye, and only those rays from some points nearer than infinity can come to a focus upon the retina. This is the far point of the myopic eye.

Myopia may be produced by increased refraction of the cornea or crystalline lens, curvature myopia, or by too great a length of the optic axis, axial myopia.

In many cases myopia is due to elongation of the optic axis, the result of pathological changes in the coats of the eye.

Myopia is frequently progressive, and the increased convergence rendered necessary by the near position of the far point is a significant factor in the production of myopia on account of the distension backwards, which results from the compression of the ball between the external and internal rectus muscles.

Myopia does not usually decrease with age, but, on the contrary, tends to increase up to adult life or later.

The term astigmatism is applied to that refractive condition of the eye in which a luminous point forms an image upon the retina, the shape of which image is a line, an oval, or a circle, according to the situation of the retina; but never a point, that is, the object is never accurately focussed. Hence there is a circle of diffusion.

In regular astigmatism there are simple hyperopic and myopic astigmatism, compound hyperopic and myopic astigmatism, and mixed astigmatism, *i.e.*, hyperopia and myopia combined.

Simple astigmatism means that one meridian of the cornea is normal and the other hyperopic or myopic. The normal meridian for the hyperopic is the vertical, and for the myopic is the horizontal.

Compound hyperopic or compound myopic astigmatism is that a plus or minus spherical is needed for both meridians; but that, in addition, one meridian is stronger than the other, and hence a + or — cylinder has to be added in order accurately to focus an object upon the retina.

Mixed astigmatism means that one meridian is hyperopic and the other myopic.

Simple astigmatism of a small amount, or a small grade of

compound hyperopic or myopic astigmatism, is always associated with normal or nearly normal vision; and also with the greatest functional disturbance of the nervous system.

The greater the variation of the axis of a cylinder from its physiological position the greater the disturbance of the nerve centres; and also it is as marked if the deviation in one eye is exactly opposite to the deviation in the other.

In cases where the vision is normal, which, of course, does not imply a normally refracting eye, the nerve-centre disturbances are often very pronounced. This is due to the fact that, as by an exertion the eye can focus well, and as it abhors any approach to a circle of diffusion, it always strives to overcome it. Especially is this the case where it can almost or completely accomplish it. Hence the reply, "I can see well," is only often a sign that the eye may be the origin of acute suffering.

Now, as to the disturbances affecting many parts of the body, I shall mention some of them. Of headaches, 60 to 80 per cent. are due to eye-strain. Again, the only complaint may be a languid, listless state of the nervous system, unassociated with any other symptoms, and the statement that the eyes are always quite easy. It is in this type that the true cause, viz., eye-strain, is often completely overlooked. Even when it is found out and demonstrated, very difficult is it to convince the physician that such passive lethargy and weakness of the whole nervous system can be due to this cause; for, as he remarks, the eyes and head do not, by their symptoms, as is the usual rule, draw any attention to eye-strain as a cause.

Marked digestive disturbances of the stomach, associated with pain, vomiting; disorders of the bowels of various kinds, as pain, constipation, diarrhea; great mental depression, leading up to threats of suicide even; severe and agonizing pain in one part of the head like the most intense neuralgia, even requiring hypodermic injections of morphia to allay; ringing in the ears; great dizziness; inability to fix one's mind on any subject; epileptic fits; a condition of optic neuritis in hyperopic eyes; all these, and more, may arise from eye-strain. In regard to the testing of eyes for glasses, it is a fact that the more experienced the oculist is, the more careful is he, for he realizes how difficult it often is to make an eye take the proper glass.

It must be thoroughly understood that because an eye can be made to see normally 6-6 or 20-20, therefore the glass with

which this is done must necessarily be the correct one, is an entirely wrong conception.

It is the knowledge of this fact which often calls into action all the skill of an oculist; for he must find out which of all the things an eye will do with a glass or glasses, is the correct one, and also if that glass which seems to be most suitable can, from its nature, be a sufficient cause for the disturbance complained of.

In hyperopia with astigmatism, a variation from the normal standard being present, which as a rule causes nerve-centre explosions, may not in any way give rise to these explosions, is an exception which proves the rule.

In this form, *i.e.*, in hyperopic astigmatism, we have to deal with great irritability of the eye due in greatest measure to the spasm of the ciliary muscle and secondary to irritation of the retina, and hence may sometimes even simulate myopia.

In myopic astigmatism we have chiefly to deal with retinal irritation, and in the second place with spasm.

As to the mydriatics used, two are the favorites, viz., atropine and homatropin. Sometimes others are used, but not frequently.

Several years ago homatropin was highly lauded. As the dilatation of the pupil and the paresis of the ciliary muscle quickly passed away, compared with atropine, it was hailed with relief. However, this quality of evanescence is its weakness and the cause of its non-use or limited use by a great many, if not a majority, of oculists at the present time.

That the great and marked spasm of the eye-muscles, especially the ciliary, cannot be overcome by a few hours' instillation of homatropin is now an acknowledged fact, and hence, I feel, when used in such cases it only renders the confusion worse and makes accurate correction an impossibility almost.

Atropin, however, is much more powerful. If in any case of hyperopic astigmatism I am unable to get a satisfactory result without a mydriatic, I always use atropine; for I consider that with homatropin any effect will be too superficial and short-lived to be of any benefit.

I shall narrate an exaggerated case to show you what I mean. A man, aged thirty years, came to me with a history of severe headaches for ten years or so. During this time he had given him, by oculists, twenty-five to thirty prescriptions for glasses. I examined and found he had simple hyperopic astigmatism of a small amount. I could easily make him read 6-6 or 20-20 with a + .50 cyl, but I could not

make the eye decide upon an angle. It would give them, varying 50 deg. between the extremes. This showed great ciliary spasm and retinal irritation. I used a four-grain solution of atropine, putting a few drops into each eye thrice daily, and kept it up uninterruptedly for four months before I could get the eyes to take a cylinder without variation of angle.

Finally each eye did, and then I ceased the atropine. My result was satisfactory, as he informed me one year later. No longer did he suffer from blinding headaches, as had been his lot for ten years. I also gave prisms to exercise the external ocular muscles.

Here my good results were due to the soothing effect of the atropine upon the ciliary muscle and retina by preventing any work being done by the eyes, and this action aided by the iodide and bromide of potassium internally.

When these structures became quite quiet, then the retina could recognize accurately the proper position of the axis, and hence could finally name it correctly every time.

In myopic astigmatism the same treatment has to be pursued, but not so often. Here, however, the pain and uneasiness are at the back of the eye and are due to long-standing irritation of the retina, a form of inflammation not visible to the opthalmoscope, not gauged by it.

Now, another cause of trouble arising from the eyes is that the external ocular muscles do not act normally. The normal action is called orthophoria, and the abnormal heterophoria. ,

There is an undoubted substratum of truth in connection with this, but not nearly as much as has been stated. It is indeed putting the cart before the horse, when you see these muscle enthusiasts cutting and readjusting muscles, and at the same time giving to the errors of refraction a very perfunctory test, and hence oftentimes a wrong correction, that is; the glasses ordered and worn are incorrect.

Accurate correction is always a *sine qua non*, of prime importance in these cases, and operation upon the muscles of secondary importance. However, a reversal is wrong and non-scientific treatment. This, however, is too often done.

No eye can, as a rule, be properly corrected at one sitting, and it is this procedure of one sitting which so often eventuates in the ordering of wrong glasses and hence non-relief.

If the medical profession but once accepted two facts, one that so very many improper functional activities of various organs of the body often give rise to nerve-storms, simulating

every known phase of abnormal nerve-centre conditions, structural and non-structural; and that very many varieties of these storms are due to improper activity of the eye, it would then surely act as if it were weighted with this responsibility. If it did, then it should give its exclusive support to eye specialists belonging to the profession, and not as it now so often does to all kinds and varieties of irregulars and hangers-on. We oculists do wish that the general profession would bestir itself and learn to test eyes for errors of refraction. In this way could it inculcate the lay mind with a true conception of the prescribing of glasses. It could select the cases that should be sent on to the oculist and prescribe for the others, and thus prevent much harm now being done.

In this way could it gradually drive out of the field a class of men which has no right in it, and which the commercial instincts and greed of the manufacturing companies of optical goods have wrongly forced into existence.

This class, devoid of any knowledge of the eye, except the most rudimentary, is thus dealing in a thoroughly commercial way with one of the most important and difficult branches of eye work.

This branch of eye work, *i.e.*, errors of refraction, ought surely to receive your careful attention, when, as I have already mentioned, it is at the root of 50 per cent. of all diseases of the eye.

THE AMERICAN DISEASE: AN INTERPRETATION.*

By WILLIAM BROADDUS PRITCHARD, M.D., (PHILADELPHIA).

Medical nomenclature, certainly as regards names for many diseases, stands to-day the most neglected, the most incongruous, the least rational and the least progressive of all the minor divisions of the subject. Many of those most familiar justify a continued existence solely through the fallacious law of traditional custom. In some instances, both name and disease being inelastic—typhoid fever or epilepsy, for example—no special harm is done. In others, as hysteria and chorea, we continue to insult intelligence apparently without either conciousness of shame or hope or desire for reform. There is something of promise in the tuberculosis of to-day rather than the consumption of our fathers, but much remains to be done, the work having scarcely begun. The field of neurology, perhaps, more than any other, needs the scythe and pruning hook. The latter instrument could, in my judgment, be used with particularly beneficial effect if employed vigorously and with discriminating judgment in neurological nosology. Its first work, if in my hands, would be to clip and trim and shape into at least some semblance of definite form and substance that phantom, once a tree, now a forest and rapidly becoming a wilderness, so rank and riotous is its growth, neurasthenia. No shorter road to nervous prostration exists than along the route of present interpretation and mental comprehension of the term as generally understood or misunderstood. I confess to an antipathy—I think rational though amounting almost to an obsession—for the word. Originally intended to possess a definite significance, its field of application has been so elaborated and broadened and abused that to-day it means almost anything, and with equal truth almost nothing. The inspiration which gave it birth marked the genius, but the child has grown a monster, fattening upon the flesh of hundreds of brothers and sisters, and even its cousins. It is still from custom classed among the neuroses or psycho-neuroses and thus the special property of the neurologist, but like its twin sister—the only sister left, by the way—hysteria, it has wandered afar with an omniverous appetite and is known to-day and claimed in some one of its hydra-headed forms in every field of medicine. To the stomach specialists belong the gastric and lithemic types, to the surgeon the post-operative and some of the traumatic cases. The sexual neurasthenic is the property of the genito-urinary specialists, the reflex cases are almost equally distributed to those who know the eye, the ear, the nose and throat, while the neurolo-

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gists divide the remainder with the gynecologists, or play battledore or shuttlecock with all. The general practitioner alone is counted an invader in this field, and he, wise man that he is, with appreciative philosophy rarely feels himself aggrieved.

My criticism is not of the term etymologically. On the contrary, properly restricted in interpretation, it is an excellent example of word-making. It should stand, however, for either fish, flesh or fowl—for a definite entity or syndrome—if retained in our nosology. If discarded in this field, by all means keep it, but restrict it to the broad, descriptive significance of a generic term alone. I am not yet willing to accept the dictum embodied in the recent paper of an eminent American writer who, with a stroke of the pen, announces the passing of neurasthenia, for which he would substitute a group of pure psychoses, if for no other reason than that he leaves us none the better off for such a begging of the question; and yet one is almost tempted to let it pass away into final oblivion and without a protest on reading a serious thesis by another recent writer upon neurasthenia in babes. If it is to continue a neurological and general medical waste-basket into which we are to dump all forms and degrees of illness associated with irritable, nervous weakness to which we cannot attach a standard label, then it cannot be lost too quickly. It means to-day to the student mind mystery, confusion, chaos and correllated aversion, curiously mixed with a contradictory fascination; to the patient it has become a term full of suspicion; to the medical teacher it is a term of reproach. No observation or experience during my fifteen years of post-graduate teaching has been more emphasized than this attitude or mind of the student body. Year after year and many times a year, the cry has been the same from all my classes: "What is neurasthenia?" I think you will agree with me that something should be done. The solution of the problem to me seems relatively simple. Let us stop running after strange gods and the making of false idols and return to the worship of our fathers and to one faith. There *is* a nervous affection—the very same which originally inspired Dr. Beard to coin the word, with a broadly constant symptom picture, a more constant etiology, a conjectural pathology, a fairly certain prognosis and a definite plan, in principles at least, of treatment, the chief and essential symptomatic manifestation of which is an irritable, quick exhaustion of nervous function in many or all directions. It has become almost lost, it has suffered degradation, it has fallen from the genus to the species in the literature of the subject, not so much through intrinsic conditions, but because of the confusion and chaos of interpretation. The dignity and importance of this subtype, its rapid and progressive increase, the charm and fascination of its study

and of its remedial and curative treatment are such as justify and, indeed, demand that it be taken from this chaotic mass and be given a distant identity. Let *this* be neurasthenia. We shall simply give back to Cæsar what was his, lost property to the original owner. It is but the restoration of the birthright. How the thief will cover his nakedness is his problem, not ours.

I have but borrowed for a purpose my title, and having explained my motive, I discard it. And yet it is not altogether bad. That it has the ring of cheap sensationalism is a just criticism, though nothing was further from my mind, a disavowal which I hope has been anticipated and is accepted. In much that the condition that I have in mind represents, in much that is peculiar to this affection—to neurasthenia—the term, the American disease, is both accurate and appropriate. As I conceive it, it *is* an American disease indigenous to this soil and essentially a product of causative conditions peculiar to this country. That it now exists elsewhere, and probably always did in sporadic form I do not doubt, but this is its home, this its soil, this the atmosphere in which it luxuriates. What is this disease? What are its symptoms? How differentiate it? What is its etiology and prognosis, and how is it to be treated? My limit of time will permit me to create the scheme of the picture only, but if the viewpoint be the proper one and the perspective liberal in breadth, any one of my audience will, I am sure, be able to do the filling in. I would count my work well done and a good end accomplished if I did no more than infect you with the enthusiastic interest with which the subject inspires me. In the effort to do so I shall create part of the perspective referred to. First as to your material: Neurasthenia never occurs in fools. The idea constitutes a paradox. Neurasthenia may make a fool, but you cannot make a fool a neurasthenic. It is a disease of bright intellects, its victims are leaders and masters of men, each one a captain of industry. Each case is unique as a study if you are to study helpfully. There are no arbitrary limits to the horizon of studious effort. The political history of the world has been made largely by paranoiacs. Mahomet, Peter the Hermit and Oliver Cromwell are examples in point, to go back no farther. In each there was an imperative and an impelling monomania. The world of literature, of art and of science, of fruitful endeavor in all higher fields, is indebted in an analogous degree to the neurasthenic, analogously endowed with an imperative and an impelling energy. Dr. Gould's list includes such names as Carlyle, Wagner, Huxley, Spencer and many others. The confidence, the faith of patients of this type, is to be classed as an inspiring stimulus in itself and is well worth the struggle to grasp understandingly this subject. That yours is the helping hand depen-

ded upon by such men—such giants—whom you may lead as little children; the knowledge that you, and sometimes you alone, may bring back into the world's arena of action and into the old supremacy, such factors in the world's work, represents to my mind an objective, a purpose, a sphere of usefulness second to none of the many laudable ambitions along the highest planes of medicine.

In painting the clinical picture it would mar my scheme to paint an individual likeness. I shall give you first the basis for a composite photograph, made up of the case histories of fifty selected patients from private practice. Forty-two of these were American born, the remainder, 8, with two exceptions, had been residents more than fifteen years; 22 were from New York City, 4 from Connecticut, 3 from Massachusetts, 5 from Pennsylvania, 2 from New Jersey, 5 from as many different Southern States, 1 from Canada, and the remaining 8 from as many different sections. Forty-three were from cities of more than 100,000 inhabitants, although only 21 were city born. The average age was 37, the oldest 62, the youngest 26. Without a single exception all were brain workers. Sixteen of these fifty had been makers of history in different spheres, some large, some small; mercantile, literary, religious, scientific, political or economic. Two of the number were among the hundred captains of industry assembled in a list made to commemorate a national function celebrated a few years ago. By occupation 13 were financiers, in multiple mercantile lines, really better described as promoters; 6 were lawyers, 3 clergymen, 2 merchants, 5 physicians, 5 brokers, 4 school teachers. Of the remaining twelve, 2 were professional politicians, 2 corporation officials, and 4 managers of large industrial plants. Four of the fifty were men of independent, self-acquired means, who described themselves as having no occupation at the time of record. They have been included in the groups mentioned according to previous occupation. Four of this series were women, 1 a journalist, 1 an actress, and 2 of them teachers. Fourteen of the fifty were unmarried, the age average of this series of fourteen being relatively high, forty-four. The four females were all childless, though two of them were married.

Instead of an analytical elaboration of individual symptoms, let me give you a standard clinical history selected from the series of fifty as a type portrait.

M., aged 33, male, born of healthy good stock, American parentage, the only handicap being parental poverty. Driven by necessity and by that subtle factor, temperament, to early effort in extraordinary degree, he acquired the strenuous, ambitious, high tension, keenly sensitive habit. He could not afford a liberal or broadening education because his own dollars paid

for it. At 19 he was in business as apprentice in a large establishment manufacturing mechanical engineering appliances. At 26, with a capital of $500, he organized a company, had it incorporated, was president, secretary, treasurer, superintendent, salesman and chief stockholder, entering into competition with established and lavishly capitalized rival corporations. Awake at 7, he hurried through breakfast a few minutes later, mixing an omelet with an order or a countermand, assimilable sometimes with the former, always incompatible with the latter, taking in with his coffee the London market or the Paris bourse, dividing the steam supply between brain and stomach when it should have been all turned on at the point of physiological demand. A hurried walk to the train, possibly a delusional constitutional in this very walk, the steam being still turned on to the top floor. In the office a pile of mail, interviews with clerks, orders, directions, instructions, detail work in every department. Just here *en passant* is laid the immediate foundation of the breakdown. It is the man of detail, the man great in everything except the qualities which make the general, who becomes the neurasthenic. It is the crime of attending to minutiæ which makes the nervous derelict. The general is never a neurasthenic. It is the one flaw in the statue of true greatness. That quality, the highest, which helps us to select our lieutenants, is always lacking. The neurasthenic is the archetype of the poohbah. He is not only general, but also colonel, major, captain and private. The penalty is inevitable. No man can do the work of four along higher lines without paying for it.

After four hours in the office this man goes to lunch, tired nervous and with preoccupied mind. He takes his secretary or manager, and again the attempt is made to mix a steak or an omelet with a business problem. The steam is still turned on at the top, our patient eats fast and drinks a lot of water or other fluid, prematurely flushing the contents of the stomach into the intestine. Already by nervous inhibition he has interfered with biliary and other secretions The intestine, the duodenum, cannot take care of the albumenoids—the proteids—properly. It cannot take care of its own. The alkaline reaction of duodenal secretion has been upset by the flushed overflow of acid gastric juice, the secretion of bile has been inhibited by the state of mental tension and the diversion of energising agencies from digestive viscera to brain. Fermentative decomposition with resulting ptomaine and toxine formation follows, deficient nutritional assimilation plus chemical irritation are added to cell fatigue along a routine line without rotation. Notices of protest begin to come into first subconscious recognition, but are disregarded. They may come from any one or many sources. Headache of the cincture or helmet type, vertigo a

sense of irritable weakness, mental and physical follows; vague, mysterious messages in a strange language, never heard before, are received but not understood. This patient has always been well and has had no training along the lines of familiarity with symptoms. These messages at first ignored, sometimes hushed with a cocktail or a highball, or many of both, become more and more continuous and imperative. The habit of almost mechanical activity of mind projects itself into the hours for sleep. Insomnia develops, at first as dreamful, anxious sleep, then with fitful, broken sleep, and later with an allowance cut by more than half from the normal. He wakes tired, irritable. The pneumogastric is one of the first and often the most emphatic of the aggrieved protestants. Palpitations, over-action, an irregularity partly toxic, lay the foundation for what later has become an obsession of fear of sudden death —heart anguish. He fears to be alone, to walk alone, to sleep alone. To this other fears have been added. A perfectly legitimate dizziness has laid the foundation for an almost hallucinatory persistence of this impression. Rapid motion, as in the cars or a carriage, high places, sudden changes in the visual perspective, originate as many phobiæ. Every nerve gets on edge and this hyperesthesia of auditory, or visual, or olfactory, or gustatory, or pneumogastric nerve, varying, as it necessarily does, in degree, gives explanation for the proteon system picture. It is the mystery of it all which leads to introspection in attempts at explanation, and finally to an exquisite exaltation of subject consciousness, a veritable delirium of anguish.

Neurasthenia is essentially a recoverable affection. In a majority the recovery is complete and final. In a few, usually neglected or mismanaged cases, the recovery is imperfect, relapses are common and the neurasthenic habit becomes almost a part of the individual. Even in these cases a steadily progressive tendency to recovery and to a normal poise as the final fixed habit may be established by persistent effort based upon an intelligent understanding of the general principles of treatment plus an appropriate application of such principles to the personal equation of the particular patient. Neurasthenia carries with it no penalty to succeeding generations. This statement is contrary to *a priori* reasoning, and also contrary to routine teaching and unthinking or ignorant belief. It is a statement based, however, upon careful observations in an extended experience, and I believe it to be absolutely true. The victim pays the whole penalty; the disease is free from the law of entail. The high average standard of good health and nervous poise in the children of neurasthenic fathers has been a frequent personal observation.

I do not believe that any individual case of neurasthenia

ever originated in a single cause. The very essence of the affection makes such an hypothesis a paradox. Equally true is it that no single agency is sufficient to explain the prolonged maintenance of this condition. Any one of many causes may appear to dominate in a given case and for a given time, but the carefully studied etiology will prove a complex one in every instance. The list of stereotyped and empirically accepted causes is a long one and undergoes a progressive expansion from year to year. Overwork, worry, prolonged mental tension and anxiety, malnutrition from deprivation of food, sleep and rest, toxemia of autogenous and heterogenous sources, shock, trauma, reflex irritation, and as many more are on the list. Most of these are contributory factors only, and some are effects which are essentially secondary, being part of a vicious cycle, vicious in fact and even more so in interpretation. The insufficiency alone of any of these factors is tacitly admitted in the usual statement that an hereditary predisposition is fundamentally necessary, a proposition not sustained in my own experience, though carefully investigated always. Neurasthenia is, I believe, essentially an acquired state and heredity, except of temperament, and a high grade cortex is an almost negligible equation. My chief criticism of the ordinary etiology as outlined is the narrow viewpoint with resulting technical limitation in treatment. What is the cause of these causes? *The* factor in neurasthenia in the American disease—the factor common to all cases—is, broadly, that of atmosphere—the atmosphere peculiar to this country, the atmosphere of limitless possibilities, not in one field, but in all; in commerce, in art, in literature, in every field of intellectual accomplishment. It is this ether of limitless possibilities which stimulates the individual to a degree of effort, of tension, of strain, of superstrenuous endeavor, impossible and unknown, except by the infectiousness of example elsewhere. There is no limit to the game, and anybody may sit in. America is the only country in which you can go in with one white chip and have a chance to quit the biggest winner. It is this atmosphere which is the incentive to overwork. It is the anxiety, the tension, the strain of the game, which brings worry, loss of sleep and all the rest; and even here the penalty comes indirectly. The intoxication of endeavor, the delirium of effort, is at the expense of all conservatism. The laws of nature—inexorable as fate—fate itself in fact, are violated not daily, but every hour. The hygiene of life is set aside. All kinds and degrees of insult are offered to brain, stomach, heart and every other organ. Day after day the steam is kept turned on and at full pressure to the one floor, and, worse still, often to the one room. Is it any wonder that all the rest of the house grows cold, or that, the power being insufficient, the machinery of the lower floors

works poorly and makes poor goods? Every function suffers sooner or later. One after another, and sometimes several together, they protest, then openly rebel and finally go on strike. Indigestion, toxin and ptomaine formation, torpor of sewerage function and resultant, defective elimination add the element of chemical irritation, or autoxemia, or lithemia, to the situation. The tired brain cell gives way under this added handicap and goes out on sympathetic strike.

The accident of dominating symptoms in a given case is but rarely of any value in determining the etiology. Gastric and lithemic and other types may be recognized and distinguished symptomatically with some minor advantage, but no more serious error of interpretation exists than to conceive of them as primary etiological types with a correllated therapeusis. Anti-lithemic drugging will not cure a lithemic neurasthenia nor will lavage make well your so-called gastric cases.

I have again and again noted a urine with specific gravity above 1,030 with 14, 16, 18 and even 20 grains of urea per ounce, with lime oxalate and urates in abundance, all these conditions giving way to the normal under direct treatment, the neurasthenia remaining essentially unchanged. I never knew a sexual neurasthenic, so called, to be cured by any plan of direct genito-urinary treatment, and this statement applies with equal truth and force to all efforts (and I have seen many) to cure the reflex cases by removal of a supposed cause in any peripheral irritant.

I know of no condition in medicine which demands more exactingly of the physician all the diagnostic resources of the profession, and yet mistakes in diagnosis should be rare. The symptomatic semblance of neurasthenia—the pseudo forms—which may sometimes present much of the picture, but will always show a radical omission or addition somewhere, should always be in mind and should be excluded carefully seriatim. More than one patient referred to me as a neurasthenic has been found to be the real victim of tuberculosis, of malaria, of Bright's disease, of gastric ulcer or some other similar affection. Anomalous forms of Basedow's disease in women and various toxic states among men have represented especially common mistakes in diagnosis. Paretic dementia in its incipient stages and some forms of melancholia, particularly the affective types, demand special mention. A guarantee of escape from the opprobrium of error as to the pseudo types is possible only through an exhaustive recourse to all measures and methods of accurate information. Elaborate urinalysis, blood examinations and often examinations of the sputum is a routine procedure with me. In any case in which the dominant symptoms are referable to a particular function or organ persistently, I am proportionately suspicious of a local disease at

least complicating the general state. It should not be forgotten that a neurasthenic may have a coexistent Bright's. In Basedow's disease which, as we know, may utterly lack the spectacular symptoms, the absence of goitre and of exophthalmos may easily lead us to interpret the nervous irritability, the quick exhaustion, the fears, the digestive and other functional disturbances, the loss of sleep and the widespread vasomotor symptoms as due to a neurasthenia, but the habitual quick pulse, the shallow respiratory action, the diarrhea and the *tout ensemble* of constancy in the picture will always give rise to doubts which will be converted into negative certainty when the etiology is considered. From paretic dementia we can distinguish neurasthenia by the presence in the former and the absence in the latter of organic signs. No matter what the degree of incipiency, if the disease has advanced to the point of inducing symptoms, we shall find in paresis somewhere some of the physical signs. Special care should be observed in the melancholic (by the way, the majority type) forms of paresis. In melancholia we have, no matter what the subtype, a constant syndrome ; a characteristic facies, a post-cervical ache, a shortened sleep, an irrational melancholy and a tendency to suicide. In neurasthenia this facies is absent and the tendency to suicide is rare. Melancholiacs get to sleep as a rule with but little difficulty, but wake too soon, at 2, or 3, or 4, and sleep no more. In neurasthenia they sleep lightly, dream much and wake often. The post-cervical ache may belong to both, but in neurasthenia it is often a cincture or helmet headache, quickly dissipated by mental diversion. The neurasthenic can laugh, the melancholiac cannot. For a melancholiac to laugh is to refute the diagnosis. From myasthenia gravis it is to be distinguished chiefly by the absence of dominant bulbar symptoms.

What is the pathology of neurasthenia? The answer is almost anyone's guess, and yet to know the lines of experimental research and investigation already established is a long step in the direction of what will finally prove the correct guess. The work of Hodge, familiar to you all, was a far call in the right direction, and while it has given us no final solution, it probably paved the way to the yet to be demonstrated pathological explanation of these cases. The effects of fatigue, of worry, of irritation, upon the brain cell structure was proven to be actual and demonstrably so, by his work. Barrows has added observations which demonstrate with equal positiveness, the structural and sometimes actually organic changes and results which follow to the cell from malnutrition. All neurasthenics, it should be remembered, are examples of malnutrition from faulty assimilation and metabolism, usually secondary. The work along chemical lines with a final explanation in states of auto-intoxication promises much, but that which

appeals most strongly, even though as yet it offers least in a tangible, material way, is a combination of the others with an imaginative elaboration of the ion theory. The analogy of the highest governing nervous system with a telephone service in a large city has occurred to many, appeals to most of us and is familiar to you all. We have all been able to grasp mentally some conception of the power plant, the conducting wires, the receiving and transmitting station of the subscriber and a central, but the plan of a central switchboard is where we stop. The hello girl of the central station will not do. She is too unreliable; she goes to sleep on post; she talks distracting gossip; she has no sense of duty at times. Her sole stimulus to duty well done is often the approval of the inspector only and the $10 per week. Neurasthenics don't gossip, they don't go to sleep—more's the pity—and yet the switch gets out of gear and you cannot get a connection, or if you do there is a buzz and you can't understand which stands for the weakness; to which we might add in carrying out the analogy, the usual profanity, to represent the irritability. Mendelssohn, Frankhouser and others, in attempts to give a tangible, graspable explanation of electrical action upon nervous function, have advanced and elaborated what might be called the theory of wandering ions. You will recall that, when first announced, the neuron theory, in addition to facts proven, claimed, but did *not* prove a distinct individuality for each neuron, with no anastomosis anatomically with our neurons. This undemonstrated claim was unaccepted for the reason that it left less explained than before the observed and familiar facts of concert of action and synergistic relationship of nervous function which seemed to demand some anatomical connection. Imagine bodies endowed with autogenous mobile life, which stretch an arm from 1 to 5, or A to G, wandering about with a restless usefulness, connecting two separate souls who want to get in touch in the same way but with infinitely more of reliability, as the central hello girl connects you up with the number you send in from the transmitting phone. Imagine these little bodies goaded day after day to extraordinary effort, allowed no rest, no sleep, whipped by alcohol, or tobacco, or coffee, suffering from deprivation and irritation in every way, rations served foul, working for a thoughtless, selfish, utterly inconsiderate master. Do you wonder that they get discouraged, tired, exhausted and confused, taking messages wrong, turning in a fire alarm here, calling in the police there, doing many things which they should not do and leaving undone those things which they should do? Very pretty, you will say, but fanciful. I admit it, but I deny any more of fact in any other theory.

The first step—the essential foundation of any plan of successful treatment in neurasthenia—is the establishment of a

proper relation between physician and patient. The status of the physician should be firmly established before the question of treatment is considered at all. He will have laid the foundation of any plan of successful treatment well in a direct ratio with the thoroughness, the exhaustiveness of his diagnostic examination of the patient. Nothing should be taken for granted—no second-hand information should be accepted. At the risk of being tedious, examine for yourself. Five minutes or less is often more than sufficient time for a final diagnosis in paresis or tabes—two hours is often time well spent in the first examination of a neurasthenic, and this is true even in the instances in which as many minutes only have been necessary to convince you of the nature of the case. Remember there are two parties to the transaction. Your own enlightenment is not the only requisite. The neurasthenic always takes himself and, at least, some of his symptoms seriously. To tell him abruptly that this or that means nothing is not convincing to him, however true to you. No obvious foundation has been laid for so positive a statement in so short and superficial an examination. To you many of the symptoms are distorted by exaggeration, to him they are real. Do not forget the axiomatic fact that neurasthenia does not develop in a fool, and as corollary to this fact make your appeal to the intelligence of your patient. Explain things; give the patient something tangible to grasp, some explanation which appeals to reason. He will leave the ether of imagination and come down to the terra firma of fact gladly. The effect at first may be upon the subconscious ego only, but the leaven of action will later rise into controlling consciousness. The physician, by the way, should never think, or believe, or guess; he should know. Therefore, he should lay at least a plausible foundation for such knowledge in a patient examination at the first interview. It is just as important that a reverse attitude should be the rule thereafter. Discuss with your patient in subsequent interviews every topic conceivable except his ills. At stated intervals go over the case objectively, taking an account of stock. Where favorable progress is noted, not only mention it—prove it; if still *in statu quo*, explain the delay in results. Silence is rarely golden in such situations. Equally important with this factor or proper relationship between doctor and subject is the control of the patient's environment. Just which is proper varies with different cases, but once settled, it should rarely vary with the case. Compromises and concessions are always dangerous. The patient's hand should never touch the tiller, once you have taken charge of the ship. First, place him so as to minimize the influence of all adverse factors, domestic, financial or otherwise. Break up, as far as possible, all subtle or obvious factors which contribute to a morbid

introspection by conscious or subconscious association. Encourage objective consciousness by a change in the physical and mental atmosphere. Sometimes this must be done radically, and the patient cut out from the family or from his business. Never leave him alone, and never leave him idle. Put with him a tactful, resourceful, sensible, attendant—train your own nurse, by the way—train him over again, if a hospital graduate. Don't call him a nurse in any event—neurasthenics resent trained nurses. Give all your instructions to this nurse-companion—never to the patient, who should have nothing whatever to do with his case. Arrange all details of diet, of exercise, medicines, baths, diversion, etc., with the nurse. Give your patient a chance to escape from a knowledge every hour of the day that he is a patient. Keep him busy, fill in every minute of the day. A salt rub in the morning, the patient standing in eighteen or twenty inches of hot water, three minutes of practice in deep breathing exercises, after which comes breakfast. All meals should gradually be made as full and as nutritious as possible. I observe idiosyncrasies, but no other law of special diet. After each meal from twenty to thirty minutes of recumbent rest is insisted upon—a habit observed by nearly every carnivorous animal, except man. Next comes the daily visit to my office, with treatment by the galvanic current, one electrode back of the neck, the other over the forehead, both as large as possible, in order to get the utmost diffusion at the point of contact and thus a maximum of electricity with a minimum of discomfort from local action. A steady battery, a rheostat, a meter, and proper electrodes are absolutely essential. Part of the benefit is undoubtedly due to suggestion. This is a small part, however, by comparison with what I am firmly convinced by years of careful observation to be an intrinsically dynamic effect of sometimes striking benefit from electricity thus administered in these cases. I never exceed five milliamperes in amount, or half an hour for the seance. Usually I begin with one milliampere and a five-minute seance. On leaving my office, my patient goes direct, riding or walking, according to circumstances, to a gymnasium, the director of which, Dr. Watson L. Savage, is a medical graduate, whose life-work has been given with enthusiasm to the co-operation, elaboration and perfection of a plan, which we both believe will, when perfected, prove a specific, curative treatment for these cases, a proper environment and control being the only other essentials. By this plan of psycho-physical, educational control, we secure, by the indirect method, what is always difficult, and often impossible, by any direct plan—a lowering of tension, a mental relaxation, a return to rational inhibition, to order from chaos. These patients are taught the lesson of physical, muscular relaxation—how to lie

down, how to go through the mattress to the bottom, how to turn loose physically. That the muscular system is energized and overkeyed into states of hypertension through sympathy with states of mento-nervous exaltation is familiar to us all in the tense mouth, the corrugated brow, the clenched hand, the restless walk. We simply start at the other end, and re-educate the higher through the lower. The quickest, the surest, the most rational way to key-down a man mentally, is first to key him down motorially. I have waited for ten years of results to accumulate before announcing publically, except in the lecture room, the value of this procedure. I give you no experimental theory. My unqualified endorsement is based not only upon a rational conception but many confirmations in experience. I count this part of the plan of treatment in neurasthenia one of the most positively helpful and essential of all the major details. The afternoon, following lunch and another half-hour of rest, is spent out of doors—a drive, a horse-back ride, golf, tennis, a walk, a visit to some museum or place of public interest: a shifting from one to another of these various diversions, largely based upon the personal equation of temperament and aptitude in your patient, fills up the afternoons. In suitable cases part of the evening must be filled, and occasionally the theatre or a concert can be utilized, but never at the expense of sleep, if insomnia be present. A half-hour of massage at bedtime closes the day's work.

This one symptom, insomnia, must be controlled always. Make your patient sleep—count a dreamful night insomnia. Veronal, trional, sulfonal, in 5, 10 and 15-grain doses, are effective and satisfactory. I often shift them. All should be given in some hot menstruum. No nervous patient should ever know his drugs—send the prescription yourself, and always mark it, "No copy. Do not repeat." Fifteen years ago a few neurasthenics under my care came back to health and nervous poise in spite of the drugs which I employed in treating them. For five years past, using less than half the drugs, my percentage of recoveries has increased fourfold. Drugs play a varying part—sometimes no role at all, again a vital one. Some patients demand them, others are indifferent, and still others need them neither mentally nor physically. Sleep must be secured and maintained, elimination and prompt sewage function regulated and complicating accidents combated. For temporary use, until the regime outlined becomes effective in lessening it, the mental state of unrest and hyper-psychical esthesia should be controlled, and the drug which most effectively accomplishes this purpose is opium in the form of the denarcotized, aqueous extract in doses from one-tenth to quarter-grain three or four times daily. Free water drinking between meals is a desirable habit to encourage and a positive water,

always symptomatically remedial in cases in which lithemia is an aggravating factor, is the Royal Fachingen. I do not believe in the sanatorium treatment of these cases as I know sanatoria. If the ideal sanatorium existed, the sanatorium plan would be ideal. I add nothing to your personal knowledge, when I tell you that such an ideal does not exist. I can conceive of no more fitting nor important statement in conclusion than one of condemnatory criticism of the misapplication of the Weir-Mitchell plan of rest and isolation in these cases. It is to be condemned first, as involving the conception of a *routine system or plan* of treatment; second, as encouraging introspection; and third, as violating in principle all intelligent interpretation of the whole subject. For women and feminine males it will do no harm; for men and masculine women it is an insult to intelligence.

Editorials.

ONTARIO MEDICAL COUNCIL.

There is a wondrous change in the atmosphere of the Medical Council since the cessation of the bitter war between the Old Guard and the Defence Association. Without any reference to the questions then in dispute it strikes the onlooker now that the methods of conducting the proceedings at present are much more dignified than those in vogue a few years ago. Our genial friend, the Honorable Senator Sullivan, the President of last year, retired gracefully, and the newly elected President, Dr. Albert A. McDonald, took his place in a quiet and unostentatious way, and during the meeting was a very acceptable chairman.

One of the most important questions considered by the members was that connected with certain proposed changes in the Medical Act, which would add to the efficiency of the law officers in putting a stop to crooks and quackery. As the proposed amendments are especially in the interests of the public it is hoped that they will be passed at the next meeting of the Ontario Legislature.

A great deal has been said during the last ten years as to the advisability of selling the present building and erecting a new one for the exclusive use of the Council. Two years ago there appeared to be a consensus of opinion that the building should be sold as soon as possible. The matter was put in the hands of a committee, fortunately possessed of considerable business ability, and it was found that the building could not be sold at a paying price, from the Council's standpoint. The committee had much pleasure in reporting that the revenues derived from the portions of the building have been greatly increased during the last two years. It has been decided that for some time at least the building will be retained in its present shape, because it will "pay better to keep it than sell it."

As usual, considerable time was taken in the consideration of certain petitions in connection with the report of the Complaints Committee. As a matter of fact, too many of the complaints of rejected students have been received and considered during

recent years. We may sympathise with the rejected student, but we have a firm conviction that the decision of the examiners should in all cases be final. We presume, of course, that the examiners are men of ordinary honesty and decency. Experience in the past has shown that any departure from such a rule is apt to lead to confusion.

One of the most important duties of the Council is the selection of a Board of Examiners. We have given on another page a list of the examiners for next year and are happy to say that we consider it in all respects satisfactory.

TUBERCULOSIS.

We have heard much about tuberculosis in recent years, but unfortunately the amount of work done this far to prevent its spread and to cure its victims has been comparatively small. Many think that the dangers of infection and contagion have been somewhat exaggerated. The opinion expressed in our medical parliament at the last meeting that tuberculosis was quite as contagious as small-pox will hardly be accepted by all. However, there is a general consensus of opinion that the disease is more or less contagious.

We are inclined to think that too little attention has been paid to the great dangers from eating impure foods. There has lately, however, been a great scare in London, England, about certain poisonous matters lurking in ordinary foods. Last year the fated oyster came into disrepute; this year tuberculous poultry came to the fore. It is stated that 30 per cent. of the poultry raised in England, and subsequently served at the table, has suffered from some form of tuberculosis. This startling statement was made by a poultry expert with reference to the rumor that the Royal Commission is now considering the question of tuberculosis in poultry.

This is by no means a new suggestion, and has been referred to in numerous meetings of medical societies. The statements, however, of medical experts did not appear to create as much interest as those of an ordinary breeder. The latter seems to have "got ahead" of the practising physician by telling the public that such diseases as roup, wet-roup, swelled head,

dropsy of the wattles, gapes, liver disease, pip and pit—all of which are the bane of the poultry farmer—are merely different forms of tuberculosis.

We are told by a prominent official of the British National Poultry Organization Society that there are districts in England where it is impossible to carry on poultry farming owing to the presence of germs of tuberculosis in the soil. The same party says that he considers that there is great danger to public health in the thousands of yards, where poultry is raised under most filthy conditions.

MEDICAL COUNCIL REGISTRARSHIP.

We think that all who have watched carefully the workings of the Ontario Medical Council during the last twenty-five years will agree that the all-important officer of that body has been its Registrar. It seems hard to realize that Hon. Dr. Pyne, who is still recognized as one of the Boys, should have been Registrar for 27 years. His position during that time has been unique. It was well expressed the other night by certain members of the Council that Dr. Pyne has always shown marvellously good judgment. We quite agree with the views thus expressed, and firmly believe that Dr. Pyne has shown himself to be in all respects "a level headed" physician. His manner has always been particularly quiet and unostentatious, but in many of the storms that have arisen he has been the most important factor in the interests of conciliation and peace. What he has accomplished in this respect will, perhaps, be more fully appreciated in the future than it has been in the past by the general public, although it is now well known to those who have watched provincial medical politics.

When the Registrar was asked to enter politics he refused to do so until he consulted with members of the Council on both sides of politics. One and all said: Yes, by all means go into the Legislature; it wants just such men as you, and as many of them as possible, both in the interests of the public and the profession. Just exactly how a red hot Tory can satisfy both the lion and the lamb to such a remarkable extent is one of Dr. Pyne's secrets, which we understand he will disclose on some future occasion.

When he became the Honorable Minister of Education it was thought by a few that his appointment as a minister might interfere with his work as Registrar of the Council. Since it was learned, however, that the Premier and other members of the Government were quite willing and even desired Dr. Pyne to be guided entirely by the wishes of the Council, there was a unanimous wish that he should be re-elected Registar. This conclusion is a most satisfactory one to the profession of Ontario.

NEED FOR THE NEW HOSPITAL.

Mr. J. W. Flavelle, chairman of the Board of Trustees of the Toronto General Hospital has written the following letter to *The News*:

"My attention has been directed to a letter in *The Globe* of July 4th, signed 'A Careful Observer,' and to reports of meetings held by physicians identified with other hospitals than the Toronto General, for the purpose of organizing opposition to the proposal that the city grant $200,000 to a reorganized Toronto General Hospital.

"The statement made by 'A Careful Observer,' 'The present movement is set on foot solely in the interests of the medical college,' is wholly mistaken. The movement originated entirely with the Board of Trustees of the Toronto General Hospital. It was conceived with two ideas: (1) To give to the sick and suffering the benefit of a modern hospital establishment, a benefit which will be denied them if the hospitals in the city continue as at present, or are improved only by the patchwork methods hitherto adopted by every hospital except the Sick Children's; (2) to assist in the educational work—medical and surgical—performed in connection with the Provincial University situated in Toronto.

"The urgent need of such a hospital, I venture to say, is felt by many citizens, and by every doctor in Toronto, whether unattached or identified with the General or any other hospital.

"The need of such a hospital, the need of added facilities for the medical and surgical educational work in the Province, and the magnitude of the undertaking, seemed to the trustees to establish a field for co-operation between the Government of the Province, the citizen body and municipality of Toronto and the present trustees of the General Hospital.

"Actuated by these feelings, the Board of the hospital waited upon the University authorities and the Government, and stated: 'If you feel warranted in granting a substantial sum

towards a new hospital establishment in Toronto in return for added hospital facilities for your educational work we, as trustees of the present Toronto General Hospital, suggest that we be given permission to hand back our trust to the Government that the resources of the trust, amounting to an annual rental of $25,000 upon properties held by it, may be available for the maintenance of such a new hospital establishment created through co-operation as above.' The response on the part of the Government and the University has been to promise, unconditionally, $300,000 to aid in the consummation of such a plan, with the understanding, however, that added facilities will be given for the medical and surgical educational work at Toronto University.

"The petition for co-operation by the city to the extent of $200,000 has received the favorable consideration of the Board of Control, and goes to the Council for action on Monday next. The agitation against the grant is conceived with the idea of defeating the measure in Council.

"Is the proposal that the Council approve of the plan and co-operate to the extent of $200,000 for the purpose of securing such service for the citizen body a reasonable one? Is the opposition actuated by a desire to render large public service or to proteet personal interests? I believe the proposal is reasonable. I know it has been made with no ulterior motive, and that the trustees of the Toronto General Hospital are possessed of the single and simple purpose to render to the citizens of Toronto a service which, from their acquaintance with hospital work, they believe essential. They do not believe the opposition is actuated by a desire to render public service, and I desire to say that the benefit to be secured to the whole community by such a hospital in every respect outweighs the personal ambition or the desire for hospital association on the part of any or all the physicians and surgeons of the City of Toronto.

"If the Council decides favorably and the grant of $200,000 is made at an early date there will be representatives of the Council, of the Government, of the University, and of the present trustees of the Toronto General Hospital; and at such conference a decision will doubtless be reached as to what will be the character of the new trust to be formed; what will be the basis of repre-entation on the board, and all such detail for the operation of the hospital as may be worked out by the co-operating bodies. Then will naturally follow an appeal to the citizen body for subscriptions for a sum which will give the necessary moneys to complete the enterprise.

"If any agitation organized by interested persons is successful in interfering with the consummation of the proposal outlined, I can only say that the burden of such a grievous wrong will be borne by the sick and suffering of Toronto."—*Toronto News.*

THE NEW HOSPITAL FOR TORONTO.

A public meeting of physicians was held in St. George's Hall, Toronto, to discuss a scheme for the building of a new hospital. Dr. John Hunter was elected chairman, and Dr. W. F. Bryans, secretary.

The subject we have for discussion is one of intense interest to citizens of Toronto and to all classes of citizens, for it touches all citizens some way or other, was the brief prologue of the chairman.

There should be a limit to the speaking, said the secretary, rising, with an eye single to accomplishment. There are some men here so enthusiastic that they will talk all afternoon; and the late adjournment proved the wisdom of his caution.

Five minutes for movers of a resolution, three minutes for others, and three minutes for the mover's reply were agreed upon.

The chairman then made a bid for resolutions, and Dr. James Spence was the first to respond.

I might say, in introducing this resolution, he said, that I have no antagonism to any private individual or any private corporation that wishes to endow an institution for the teaching of medicine, theology, dentistry or any branch of science.

We are all interested in one thing, the alleviation of suffering and the prolongation of life, each in his own way. Those who do their work by the bedsides have to use their judgments rather than the laboratories, but we appreciate the value of the laboratory work and desire to further it, and I wish to make it clear that I am not opposed to the generosity of the province in making so large a grant to medical education. But I want to say that the institutions that have served the people so long should not be moved at the whim of any Board of Trustees.

He then made the following resolution:—

"Whereas the Board of Trustees of the Toronto General Hospital contemplates the destruction of that venerable institution with its accommodation for 400 patients, and

"Whereas, the cost of a similar institution would approximate $200,000 to $300,000 to-day, and

"Whereas the said hospital is not only an historic institution, in connection with which much of the history of medical progress in this province and especially of this city is associated; but it is to-day the best-equipped general hospital, not only of this city, but perhaps of the whole province.

"Whereas, if the said hospital ever was a necessity where it now stands; to take care of the eastern half of the city—while the western half can be served by St. Michael's, the Emergency, Grace and the Western—it is more necessary now on account of

the great expansion of the city eastward, as well as in every other direction; and

"Whereas, if the General Hospital were removed to the site contemplated at Queen's Park, the whole of the eastern half of the city would be deprived of near hospital accommodation, entailing great suffering to patients meeting with accidents in the east and in transporting to the west, and as the lives of many of these depend on the promptness of the medical attention given after accidents, many deaths would be caused indirectly at least by this change.

"Therefore, resolved, that in the opinion of the medical men of the city of Toronto, here assembled, it would be a crime against the citizens of this city, and the taxpayers especially, to permit the trustees of the General Hospital to lay a guilty hand upon that institution and carry out the scheme outlined before the Board of Control.

"I don't think I need say anything more," continued the doctor. "It is not long since some of us had something to do with the birth of an institution in the west end. I am not speaking for any particular institution. I am speaking as a ratepayer, not as a medical man. We had some difficulty in getting that hospital established in the west end, and the chief difficulty was with our able Medical Health Officer. We had a great deal of difficulty, and it was only overcome through the efforts of the late James Scott, in condemning the very thing for the west end that this scheme proposes for the east—forcing people who met with injury to be carried from the Junction and the western portion of the city to the General Hospital. Mr. Scott pointed out that lives were being lost—that in the interests of humanity a hospital was needed in the west end.

"This scheme would deprive the whole of the east end of hospital accommodation. I think it is a crime, and one we, as medical men, should see does not occur. My opinion is that that hospital should never be touched. If any should go, let it be one of those that need improvement."

It was decided, upon the suggestion of Dean Reeve, to hear all the resolutions before discussing them.

Regarding Dr. Spence's motion, however, Dr. McPhedran remarked: "The hospital belongs to the trustees and the citizens have nothing to say about where it is to be situated. The trustees can place it where they like."

Dr. Palmer—"But they are asking the citizens for $200,000."

Dr. C. E. Stacey said: "We very often come across patients who are able to pay a medical man, but whose surroundings are such that they should be removed to a hospital. Suppose a man who is boarding is taken with typhoid fever or pneumonia; it is quite necessary that he have proper nursing, which he

cannot get in a boarding-house. He cannot afford to pay prices for a private ward. His first question is, 'Will you attend me if I go to the hospital?' Under the régime of the new hospital that will not be allowed.

"Therefore, in the interests of the public as well as of the medical men outside the hospital staff, I move, that "In the opinion of this meeting of the medical men of Toronto, every patient who is treated in the proposed new hospital, receiving such a large sum from the public treasury, should have the right to select his or her medical attendant, and that this should apply to all wards and all classes of patients, except city order patients." Dr. J. W. Johnston seconded the resolution.

Dr. Palmer then submitted the following resolution: "That municipal grants to hospitals and charitable institutions are right and proper because it is the easiest and most equitable means of raising money for such purposes. The poor and those of moderate means being inappreciably assessed and the rich paying all the large sums. But in all cases no one hospital should be specialized for civic forms, the grant should be equally distributed among all the hospitals equally worthy.

"That it would be unjust to vote $200,000 of the people's money without submitting the same to a vote of the people, notwithstanding the fact that the recent University Act gives the Council of Toronto the power to do so without reference to the ratepayers, thus depriving the people of their right to use their franchise."

In supporting the resolution, Dr. Palmer spoke pretty warmly regarding what he considered the aspersion cast by Flavelle upon the medical men associated with the other hospitals.

"These hospitals," he said, "have been built up with a struggle. They have filled a long-felt want. That requires no argument for its justification is evidenced by the fact that they give attention to from fifty to sixty per cent. of the city order patients. They have been built at great cost by private contributions entirely.

"I am not aware that there is an individual associated with any one of these hospitals who has a personal interest in it. The insinuation is made by Mr. Flavelle in a letter to the press published to-day, that those who are opposing this scheme are actuated by personal and selfish motives. It is a false insinuation, and if there is a personal and selfish interest, I say it lies in the hands of Mr. Flavelle himself. He is a great schemer. No doubt his scheme is wise from his standpoint and everything else that comes in his way must be crushed.

"His scheme alone concerns the interests of the suffering. It is a violation of those interests to move the General Hospital

to the centre of the city, already well provided with hospital accommodation, and leave the east end without any. It is a violation of the duty of the civic government to specialize one institution for such a grant to the detriment of the others."

Dr. Spence seconded the resolution.

The resolutions seemed to come tardily, and as no more offered at the chairman's repeated call, Dr. Sheard rose to speak. He was frequently applauded, and as he proceeded a change seemed to come over the sentiment of the gathering.

I did not come with the intention of moving any resolution, he said, but I would like to make a few remarks regarding this hospital proposition, which is very imperfectly and improperly comprehended.

I am associated with the medical faculty of the University of Toronto, but my interest has not up to the present become very great, and you will not ascribe to me a bias particularly in favor of that institution.

I have been in close touch with the city authorities, have discussed the scheme with many of them, and have been over the ground with the trustees of the General Hospital. I wou'd like to point out what this opportunity really means.

There are many features which are highly commendable in this scheme. This city has not a thoroughly up-to-date and moderately equipped General Hospital. Such an institution can only be built from the ground up. Dr. Osler was right when he said such institutions should be burned every ten years. Dr. Spence's application of the word 'venerable' to the General Hospital furnished the measure of its senility.

This movement was started by the magnificent gift of Mr. Cawthra Mulock of $100,000 for an out-patient department. It set the Board of Trustees thinking whether it was wise to spend that amount of money on the present site. The establishment of the Emergency was because of the increasing number of cases going to St. Michael's, and the conclusion that if the hospital was to continue its work it must get into closer touch with the manufacturing centre of the city. Similar considerations weighed again. The trustees approached the Government, who incorporated in the scheme something for the educational interests of this province.

The doctor warmly commended the Government's broad view and wise action, and pointed out the need for the co-operation of private wealth in carrying out such a plan. It would be an opportunity to secure for Toronto a great modern hospital, a benefit to and pride of the medical profession, and a blessing to poor and rich, unfortunate enough to need hospital treatment. Combined with the scheme was a far-seeing plan for a magnificent avenue and park in the centre of the city, embellished

with great public buildings, beginning with the City Hall and Osgoode Hall.

Dr. Palmer has put forward some things that are absolutely just and right, and regarding which I have heard nothing to the contrary. There must be conditions attached to the municipal grant. The Council is simply discussing the matter. If it goes to the people, well, they take very little interest. They are not capable of judging about it. I think it would have a good chance of being defeated. The new institution would be lost to us as medical men. I am not here as a ratepayer; I am here as a doctor.

As far as I know then, the conditions likely to be attached to the civil grant are these—

1. That public ward cases shall be available exclusively for the Faculty of Medicine the Toronto University, but all other accommodation in the hospital shall be equally available to all other practitioners in the city.

2. That what is to constitute a public ward patient is one who is unable to pay for his medical attendance.

3. That the municipality of the city of Toronto have a representation upon the Board of Hospital Trustees equal to that of the Ontario Government.

4. That in the new institution accommodation is to be afforded as far as possible to patients sent in upon the city's order.

That, said the doctor, referring to the conditions, will give each of you access to every private and semi-private ward. The public ward patients give a *quid pro quo* for their medical attendance in submitting themselves for clinical examinations.

What constitutes a private patient? Dr. Sheared was asked.

If he pays his doctor he is a private patient," he replied.

Would all patients who go into a public ward, asked Dr. Ferguson, "be entitled to free medical attendance because they go into a public ward?

"If they submit to clinical examination," replied Dr. Sheard.

He proposed a separate building to give accommodation to $3.50 a week pay patients who had their own doctors. Dr. Ferguson asked for a guarantee, and Dr. Sheard made a plea for reasonableness.

The city itself cannot demand a guarantee, he said, that there will always be accommodation for its patients. It may be overtaken by an epidemic.

Will the right be taken from city order patients to select the hospital they will go to? was another question.

Dr. Sheard replied in the negative emphatically, and

promised absolutely fair and equitable treatment for all hospitals, as far as the health Department was concerned.

Council, continued the doctor, must be represented on that Board of Trustees. I'm not prepared to say to what extent, but I think with a numerical equality with the Government. The bodies to be represented will be the Government, the University, the city and the private benefactors. I think that will be a fair representation.

In the new institution, accommodation will be asked, as far as possible, for patients sent in on city order. That, of course, must be largely theoretical, but we don't propose to give them money and have no return.

In conclusion, the doctor appealed to the medical men for unity. Nearly $1,300,000 was required for the new hospital, and what chance was there of getting the $700,000 required by private subscription, if it went forth that a large body of medical men were opposed to it? It would be a hospital to compare favorably with any in Montreal and many in the States. He urged the profession to assist this great philanthropic work in a city whose philanthropic efforts had too long lain dormant.

Dr. Sheard then moved "that in the opinion of this meeting the proposal to establish a new hospital be approved, with certain conditions," and quoted the conditions given above.

It was seconded by Dean Reeve.

Dr. Spence was not quite sure about that part of Dr. Pa'mer's motion calling for a vote of the people, and submitted the following:

"That before $200,000 be granted by the City Council, the opinion of the people be secured by submitting the same to the people."

"As a representative of the east end, it is the intention to cut off our hospital facilities or not?" asked Dr. Fraser.

"I am not prepared to say what the purpose of the trustees is," replied Dr. Sheard, "but so far as I know their intention is to sell out the present hospital ground; but there are some new buildings, and I don't think it would be at all difficult to have a small hospital there for the east end."

Dr. Sheared here submitted a statement showing the amounts received by the various hospitals for city patients during 1903-4-5:

	1903	1904	5 mths. 1905.
General	$11,723	$12,937	$8,010
St. Michael's	10,316	11,500	6,075
Grace	3,046	3,816	2,024
Western	3,357	3,713	2,101
St. John's	132	189	124

Dr. Sheard drew attention to the fact that Grace and Western combined secured about half as much as the General.

As no other resolutions were offered the chairman called for discussion of the resolution of Dr. Spence.

I agree it would be criminal to lay guilty hands on the General, commented Dr. Oldright.

Dr. F. N. G. Starr submitted as an amendment to Dr. Spence's motion, "that it would be in the best interest of the public and profession to establish the proposed new hospital." He thought a branch of the old General might be retained in the east end. There did not seem to be any doubt that a new hospital was needed. Certainly there was none in the mind of the inspector of hospitals. All knew that in some wards of the General the conditions were almost nauseating.

The motion was ruled out of order.

Dean Reeve then resumed the discussion.

The trustees have realized from their experience in hospital work that they will be guilty of crime if they do not lay hands upon the General in its present condition and secure at as early a date as possible a thoroughly modern institution.

This movement did not originate with the medical faculty of the University, but with the trustees of the hospital. Their action commended itself to a large number of practitioners.

I am sorry that strong language has been used this afternoon. I was pained to hear one member of our profession attributing motives to one member of the Hospital Board, which would be unworthy a man who stood much lower in the community, socially and commercially.

I think it would be a great mistake to pass this resolution, he said. We all think it most desirable to have our hospital in the highest state of efficiency.

Dr. Palmer—Our hospital!

I would be sorry to see any man so narrow as to confine his sympathies to one hospital, replied Dr. Reeve. This scheme was not undertaken with any selfish motive. Mr. Flavelle and his assistants deserve the gratitude of the profession for their work since they took charge of the General Hospital. This motion would condemn the profession to the present hospital as it is. That would be a great calamity.

The great bulk of the city patients, said Dr. McPhedran, come from the west or central part of the city. Regarding the need for a new hospital there cannot be two views on that question. The present one is anything but a credit to the city of Toronto.

It is said that this new hospital would retard the development of the other hospitals. It would not. The establishment of the Johns Hopkins Hospital in Baltimore was strongly opposed on that very ground by the hospitals of the city. Now

they are all proud of it because it has done more for Baltimore than any dozen ordinary hospitals would have done. It has stimulated the others to improvement. So would this; all others would benefit. Therefore it should receive the co-operation of the practitioners in the city most heartily.

He urged their co-operation for the sake of the good name of the profession, for the University and for the poor.

Dr. Wishart found in Montreal an example for the encouragement of those who favored the hospital scheme. He and Dr. Palmer, who had come from Montreal, could remember when the Montreal General Hospital was no better than Toronto's. Then the Royal Victoria Hospital was built. The General had put on wings, and anyone belonging to it would say it was because the Royal Victoria Hospital was built that the General is in its present condition to-day.

If you stop this new hospital, he said, you will put a fatal obstacle in the way of every other hospital in the city being improved.

Dr. Oldright agreed with the two former speakers. The fact that some people had come forward to help our hospital will induce others to help other hospitals. The effect of the new hospital upon medical education throughout the province had not been touched upon. A man from the Southern States had said to him, "Why do we hear nothing about Toronto and all about Montreal?"

We should not have to feel that Ontario stands behind in the matter of medical education. We all know the General is not what we should have for medical education. St Michael's is erecting a new wing, and that doesn't look as if they were afraid of the new scheme.

Dr. Ferguson said, I do not object to men of wealth being generous to such institutions, but when it comes to asking a large donation from the public treasury and one institution is singled out, I object. I don't object to the city giving $200,000 for hospital work if it is distributed among tne several hospitals.

I assure you the smaller hospitals meet a felt want in furnishing skilled nurses for the medical profession. My own cousin was taken ill with typhoid when in a boarding-house. He was taken to the General Hospital and I was not allowed to attend him. When I called one day I was told by the porter at the door that it was not visitor's day. The medical profession felt they were up against it until other hospitals were started.

Nearly twenty years ago I urged upon the trustees of the General Hospital to open a branch iu the west end, and put upon the staff medical men of the west part of the city. Had they done that the present feeling would not have existed.

The one solution for medical teaching in this city is getting

an affiliation with the various hospitals. Dr. Osler, when here recently, said no one hospital in Toronto could do it. The only way to get all the clinical material is to have the students go to all the hospitals, as is done in other cities. If you are going to give, give to all. I speak in the general interest of the medical profession in the city.

Dr. Palmer—It has been said that the probabilities are that the General Hospital will have a branch in its present position. That will meet with hearty endorsation, and I venture to say no one will object to that if it is properly maintained.

He then returned to Mr. Flavelle's allegation that the opponents of the scheme were actuated by selfish ambition.

It is a slur upon the profession of this city. He openly says they are actuated by personal interest.

If Dr. Sheard will assure me that I can attend my patients in the hospital, said Dr. Johnson, I think the best we can do is to fall into accord with him and follow his leadership, for he will get what he wants in the long run.

Dr. Sheard has practically admitted, said Dr. Spence, the necessity of retaining the hospital in some form where it is. There has not been a soul who has said one solitary word against the statement that that is the best equipped general hospital in Toronto.

Dr. Starr—Yes, but it's very bad.

Dr. Sheard—It can be made better.

The vote was taken on Dr. Spence's motion and it stood 12 for and 21 against.

Then Dr. Stacey's motion was debated, and therein lay the real interest of the profession generally, the right to follow their patient into the hospital and attend him there.

Dr. Stacey's motion is all right as far as it goes, said Dr. Sheard, but it doesn't go far enough. Why differentiate between one the city pays for, and one a generous minister pays for?

Patients who pay only $3.50 a week are not semi-private, said Dr. Reeve. The trustees cannot afford to treat as semi-private those who pay only city order rates. It is a pity that during the last two weeks stress has been laid upon the statement that the new hospital intended to take all the charity patients. Dr. Sheard will be fair in his distribution of them.

Is he a pauper who pays only $3.50 a week? asked Dr. Wishart.

He is, because the government grant pays the other half of his cost. I have seen government grants for patients in private wards, said Dr. Sheard. A man is a pauper patient when he gets his medical attendance for nothing.

There was some discussion of the assertion that the new

hospital would give free medical attendance to pay patients who would submit themselves for clinical examination.

It is pauperizing them, declared Dr. Palmer. It is unethical to bribe them in that way.

I repudiate the statement that we give a bonus of any kind to get patients to come into the hospital for clinical purposes, said Dr. Reeve.

Dr. Sheard finally made it clear that the patient who did not pay his doctor was the pauper. The patient who did have a right to his own medical attendant, and a separate building, he thought, should be provided for that class of patient.

Dr. Stacey then agreed to the substitution for his motion of the following by Dr. Sheard, and it was carried without a division:

"That public ward cases shall be available exclusively for the Faculty of Medicine of the Toronto University, but all other accomodation in the hospital shall be equally available to all other practitioners of good standing in the city.

"That what is to constitute a public ward patient is one who is unable to pay for his medical attendance. In the new institution accommodation is to be afforded, as far as possible, to patients sent in upon the city's order."

Dr. Palmer's motion for an equitable distribution of the grant, for the submission of the question, was discussed briefly and defeated by a vote of 10 to 21.

Dr. Spence's motion for a popular vote was then ruled out of order and the discussion was on Dr. Sheard's motion to append the scheme with conditions. The vote on that was 25 for and 3 against.

The meeting then adjourned.

TORONTO CITY COUNCIL.

Great interest was taken in the meeting of the Toronto City Council, July 10th, when after a discussion lasting five hours, a grant of $200,000 toward the proposed new hospital was decided on. There were present during the discussion Messrs. Flavelle, Larkin, Haney, Cawthra Mulock, the Mayor (in the chair), trustees, and a large number of physicians.

Dr. Barrick spoke at some length and protested against the Council making the grant without submitting the question to the ratepayers.

Dr. John Ferguson supported Dr. Barrick's protest; he also thought that each pay patient, whether a public ward, a semi-private, or a private ward patient should be allowed to choose

his own hospital and physician. He said that such custom and such tendency was becoming more prevalent. With such conditions he favored the grant, provided it was distributed to the various hospitals throughout the city.

Dr. R. A. Reeve, in reply, said that Dr. Ferguson, was quite mistaken with regard to the practice of allowing the profession generally to take advantage of hospital facilities, and attend cases particularly those of charity or public ward patients. That practice is being restricted more and more by the best hospitals in America and Europe, and the cases are attended by those who are responsible to the trustees. It is felt that in this way you can fasten the responsibility upon the respective members of the staff, which would not otherwise be possible. It appears to us that it would be a great mistake to oppose this generous offer and this movement which has been initiated, and so far brought to a successful issue by a few public-spirited men, to whom the profession of Toronto is greatly indebted, and to whom the citizens will be much more indebted in the near future. It is desirable that we should have a modern hospital, fully equipped in all its departments.

In regard to certain conditions which are proposed in the new institution. By vitue of the gift directly and indirectly, of $300,000 from the Government, there is the condition that public ward patients should be under the care of the medical faculty of the University of Toronto. There is a double object in this: First, the case of the sick under conditions most effectual, and, secondly, the promotion of the education of young men, the better to fit them to discharge their duty as members of the medical profession. It is recognized all the world over that hospitals have a double function to discharge, and I am sure this will not be controverted by those who are opposing this movement to-day.

It is contended by those opposed to this movement that it is unjust to the general profession not to allow them to attend patients in the public wards—those paying only $3.50 per week, or those admitted on civic orders. Every patient of that sort costs the trustees of the hospital at least $3.50 per week, in addition to the civic grant of fifty cents per day, and it is hardly fair to consider him in the light of a private ward patient.

Gentlemen who have spoken to-day contend that the profession at large should be allowed to attend these patients without reference to whether they have positions on the staff. I take issue with them. The members of the profession are qualified, but I maintain in the interest of the public, and particularly in the interest of the poorer classes, that results are better where the staff are responsible, directly to the authorities of the institution.

In reply to Dr. Noble, Dr. Reeve said it was never intended to prevent private or semi-private ward patients from having their own doctors; to allow this had always been the rule at the General Hospital.

Mr. J. W. Flavelle explained the position of the Hospital Board. He said: "This movement did not arise from any feeling of antagonism toward any medical men, nor because the Board of the Toronto General Hospital are desirous of having some favors for that hospital. It arose from their belief that all the hospitals of the city, with the exception of the Sick Children's Hospital, should be rebuilt. They believed that the Toronto General Hospital, as it is at present, has done what Dr. Reeve claims for it, efficient and good service. They believed, however, that the conditions which are present in modern surgical and modern hospital work require altogether better buildings and better equipment than any hospital the city has at present. I may say of our friends of St. Michael's, Grace, or the Western Hospitals, that if it happened to be their fortune to present proposals to this Council, whereby they would secure new buildings, I would help them by personal subscription, and by effort before this Council. Not because it was for this hospital or that hospital, but because it would be for the benefit of the whole body of citizens."

After the delivery of these four excellent addresses, of which we have given only brief abstracts, the question was discussed in all its aspects by the Mayor, Controllers and members. We hope we shall give no offence to the Council when we say that we were surprised at the ability shown by the members in the discussion, and the very intelligent conception they evidently had respecting all matters pertaining to hospitals. Apart from the professional aspects we were delighted with their prompt and snappy method of conducting the routine business. We believe the citizens of Toronto have reason to be proud of their City Council, which, as a deliberative and administrative body, is, in our opinion, second to none in Canada. We think that even Osler would decide that no chloroform is necessary at the present time. In fact, a large proportion of the members look like boys, but, at the same time, very *intelligent* boys.

We have always felt that the firm of Messrs. Parke, Davis & Company spared no pains to entertain members of the medical profession whenever they visited Detroit or Walkerville, but the writer is desirous of expressing his appreciation of the attention shown him on a recent visit to London, England. The genial Manager of their English branch, Mr. F. M. Fisk and Mr. W. B. Whalen certainly helped to make our stay in London most enjoyable, and we fully appreciated the tention.

KOCHER'S CLINIC.

The following is extracted from a letter received by a relative in Toronto:

Bern I am beginning to like very much, and, strange as it may seem, from the first I have felt more at home than I did in London. It is a pretty little place and the people one meets seem very nice. My German I find is not of much use, as the language here is a sort of combination of German, French and Italian, and usually when I go to a place and ask for anything I am answered in English, though we don't hear as much of our own language here as we did around the Lake of Geneva.

My boon companion is an Irishman who is doing three months' work on the continent on a travelling scholarship he won at Dublin University. He is a very decent chap, and like myself only intends to stay here about three weeks longer. From here he goes to Vienna and Breslau. There are a few more English-speaking people at the clinic than when I wrote before, and altogether we form a small colony of our own.

The hospital is situated on a hill with a beautiful view of the Alps, and lots of good fresh air. It is composed of separate buildings so that each man has his patients all in one part and does his operating in the one room. Professor Kocher himself has a clinic every day from eight till ten, and operates at the hospital at ten o'clock on Mondays, Tuesdays, Fridays and Saturdays. His class, I should say, contains one hundred students, and at least half of them are women, ninety-five per cent. of whom, I am told, come from Russia. He usually begins by showing specimens which he has collected since his last clinic, and then gives demonstrations on his patients which are brought down from the wards. The first two cases he usually lectures on, and then calls two of his class down and gives a grind on the next. When that is finished he usually brings in a number of patients for the purpose of teaching the art of diagnosis. It is at his clinics that we get an idea of what care he takes to keep his hands aseptic between operations. He uses rubber gloves in making any examination of the mouth, rectum or vagina, and when there is any chance of his fingers coming into contact with a septic wound, claiming that it is better to use gloves between the operations and take them off if considered advisable at the time of operating. At the end of his clinics a list of twelve names is posted, and these people together with any graduates who are present and have sent in their cards are allowed to be present at the operations. Usually in about twenty minutes the door of the operating room is opened and we are admitted to the room. He takes great care in washing his hands in warm running water using soap and a scrubbing brush, and when that is finished they are well scrubbed in

eighty-five per cent. alcohol and then washed in salt solution. You will see that even in cleansing his hands he refrains from using antiseptics, which I believe he gave up primarily because he found them so hard on his hands, and he says that he has had no cause to regret this step since.

The operating outfit consists of a small white coat with very short sleeves, a large rubber apron outside this, and this in turn is covered by a sterilized gown, and all his assistants wear white caps. Kocher and all who assist him wear two pairs of gloves, a pair of rubber ones, and a pair of cotton ones over them. The latter are changed frequently during the operation.

The patients sometimes walk in, get up on the table, and have a chance to see what is going to happen to them, as they often are brought in and prepared before the last operation is finished. The parts operated on are prepared with ether and alcohol, and then the whole patient, except the field of operation, is covered with aseptic clothes. In practically all his operations after the administration of the anesthetic is commenced the skin incision is marked out by drawing the knife across the surface very lightly, and then a one per cent. solution of cocaine is injected under this, and he is in this way able to proceed with very light anesthesia. To-day, for instance, I saw him remove a sarcoma from the cerebellum of a young man, and he and the patient were conversing during a g eater part of the operation. During his operations he uses a great many artery forceps, as he practically catches all bleeding points, and has no blood at all in his wounds. If the wound needs to be cleaned it is done with salt solution, no antiseptics being brought into contact with the tissues at all. The tissues are torn as little as possible, and most of his dissecting is done with the point of the knife, though his blunt dissector appears to be quite useful in his thyroid operations. When the operation is finished he puts on a clean pair of gloves and applies ligatures to all the vessels upon which he has placed clamps, and after the approximation of the deeper parts closes the skin with a continuous suture and applies a xeroform dressing. Drainage tubes made of glass are used in a majority of cases, and these are removed in twenty-four hours. The only suture material I have seen him use has been silk, and this always of the same size. When he uses it in such a place as the isthmus of the thyroid he doubles it twice. His septic patients are operated on by his second assistant in a separate room. These patients are kept in a building altogether distinct from the one in which the clean patients are.

One is struck by the short time he keeps his patients in bed after operations, as we often see them walking about in a little over a week, and none of them are kept so absolutely flat on their backs, as I have been taught they should be. They are generally well propped up with pillows. At the end of

forty-eight hours the stitches are removed in thyroid cases; at the end of eight days in others and then a dressing of xeroform gauze and collodion is applied. He has in his wards ninety-five beds, but I understood he usually has more than one hundred patients under treaiment.

On Thursday night a few of us had the honor of dining with Professor and Mrs. Kocher. There were only ten people present including his own family of four. Amongst these we had one Irishman, one Italian, one man from Holland, one American, one Swede, four Swiss and one Canadian. I sat on his left and had a very pleasant talk with him, and can assure you he is a most delightful man.

ARTHUR B. WRIGHT.

Bern, Switzerland, June 20th, 1905.

THE ONTARIO MEDICAL COUNCIL.

The annual meeting of the Ontario Medical Council was held, July 4th to 8th, inclusive. The first order of business was the election of officers for the coming year with the following result: President, Dr. Albert A. Macdonald, of Toronto: Vice-President, Dr. W. H. Moorehouse, of London; Registrar, Hon. Dr. R. A. Pyne; Treasurer, Dr. H. Wilberforce Aikins; Solicitor, Mr. Christopher Robinson, K.C.; Prosecutor, Mr. Charles Rose; Auditor, Dr. J. C. Patton: Reporter, Mr. John Downey.

Before the installation of the new President the retiring President, Hon. Dr. Sullivan, of Kingston, delivered a brief address. He stated that he bore a message of greeting from the Senate of the Dominion of Canada, requesting them to aid in formulating some means which would apply to all Canada in the arresting and prevention of that widespread disease called consumption. Dr. Edwards, the Chairman of the National Association in Ottawa, was throwing his whole powers in this great work, Dr. Sullivan stated, and would gladly receive any aid from whatever source it came.

He suggested that the Public School text-books should have a space set aside for the education of the pupils in the proper methods of cleanliness and sanitary science in general.

It was announced that a large number of doctors throughout the province were behind in their fees, and it was recommended that a notice should be sent out to the delinquents that unless the amounts owing were paid their licenses as practitioners would be revoked. The fee is $2 per year. This matter was also referred to a committee.

The report of the official prosecutor, Mr. Charles Rose, was

submitted. It foreshadows an appeal to the Legislature to amend the code so as to expedite the prosecution of Christian Scientists, who are not particularly vulnerable under the existing Act. Dealing with this branch, Mr. Rose, in his report, says:—

"Year after year I have drawn your attention to the need of a small amendment to the penal clause of the Medical Act, as from the decisions rendered by judges of our higher courts it is impossible to secure a conviction as the Act now stands against many persons who, I consider, practise medicine; but from the fact that they do not prescribe drugs, the higher court judges have decided that they do not practise medicine. Many of those who do not give medicine, although practising the art of healing, are more dangerous to the public than he who prescribes medicine. I think it is time for the Ontario Medical Council to lay the facts before the Attorney-General, and I feel sure that if this were done he would see to it that such an amendment was passed, not in the interest of the medical profession, but to protect the public from this class of healing."

Mr. Rose refers to the Goodfellow Christian Science case in Toronto, and Sir John Boyd's remarks on the subject. Then he adds:

"During the past year we have had a number of such cases cropping up in our Police Courts in different parts of the province, and in every instance the judge before whom the case was brought spoke strongly against this class of practitioner. There are many other kinds of sick healers of the same nature throughout the province who give no medicine, but undertake to cure diseases in a somewhat similar manner to the Christian Scientists, and it is to such as these that the Government's attention should be directed in any amendment made."

Mr. Rose states that during the year complaints were registered against about fifty persons for practising medicine illegally. He also complains that a number of licensed practitioners throughout the province employ unqualified men, and that in many cases the unqualified man is left in charge of the physician's practice. If an example of some of them were made by the Discipline Committee investigating their conduct Mr. Rose thinks it might put a stop to this kind of "unprofessional work."

It is hinted that several charges of a graver nature will be considered by the council.

Dr. W. H. Moorehouse, of London, moved a resolution providing for the appointment of a committee to interview the Ontario Government, and endeavor to secure a liberal grant to assist in preventing the spread of tuberculosis. The resolution met with the cordial support of the members, and the opinion was expressed that the province should lay aside a specified um annually for this purpose.

Dr. Elliott, of Gravenhurst, stated that the sanitarium at Gravenhurst was filled to its utmost capacity, and in consequence he had been unable to find suitable quarters for several consumptive patients he had under his charge.

It was shown that with the gain in knowledge as to the contagious character of the disease people had come to regard persons affected with tuberculosis with alarm. General hospitals were enjoined under pain of forfeiture of Government and municipal grants from receiving consumptive patients, and this was a wise precaution, as it was a highly dangerous thing for sick people to be thrown in contact with persons suffering from tuberculosis.

Dr. T. H. Thornton, of Consecon, regarded the malady as contagious as small-pox, and in order to stamp it out, or at least prevent its spread, provision should be made so that consumptives could be isolated and at the same time given the treatment necessary to their recovery. The Medical Association were the proper body to take charge, and the Province should bear the expense of such a movement. Dr. Mearns, of Woodstock, spoke along the same lines.

The financial statement showed a reduction on mortgage loan of $5,000, with a revenue of about $35,000, and a balance on hand of $5,764.92.

The first order of business on Thursday, July 6th, was consideration of certain amendments to the Medical Act which will preclude the probability of Christian Scientists and other "faith healers" evading the provisions of the law on technicalities.

Dr. Robertson presented the report of the committee on the matter, and after several changes had been made in the wording of the amendments, the report was adopted and referred to the solicitor, with instructions to frame a bill for presentation to the Legislature at its next session.

The clause bearing on the question sets forth that it shall not be lawful for any person not registered as a qualified practitioner to practise medicine, surgery, midwifery, or any other method of healing, or to attend upon or attempt to attend upon any person the subject of, or supposed to be the subject of, illness or disease, for hire, gain, or hope of reward. Any person so offending, on a summary conviction before a magistrate, will be liable to a penalty not exceeding $100 and not less than $25.

The words added, and which it is believed will prove effective, so far as Christian Scientists are concerned, are: "or any other method of healing."

When the report was brought down the words "medicine, surgery and midwifery" were eliminated, and the "art of healing" substituted.

Dr. Ryan, Dr. Arthur Jukes Johnson and others strongly

objected to the dropping of those traditional and classic names. Objection was also made to the term "art of healing." After a lengthy debate the clause was adopted as stated. Dr. Britton advised leaving the whole matter over for another year, claiming that it was such a critical subject that it behooved them to proceed carefully. The experience in the past had been that when medical men applied to the Legislature for amendments they usually received more than they asked for or desired. The report also provided for the holding of examinations at London, Ont.

Another amendment recommended was that in cases where a suit is brought against a doctor for malpractice, the party so proceeding must first pay the doctor the full amount owing for medical attendance.

Hon. Dr. Sullivan made application on behalf of John A. Reid, of Prescott, to permit that gentleman to take his examination before the Council to qualify him as a practitioner. Mr. Reid graduated at Queen's College in 1891, but owing to the death of his father did not appear before the Council for his final examination. The matter was referred to the Registration Committee.

It was decided to hold the examinations on the third Tuesday in November, and the third Tuesday in May next. The first Tuesday in July next was fixed upon as the date of the next annual meeting.

The Medical Building on Bay St., will probably remain in the possession of the Medical Council for some time to come. The report of the Property Committee, presented by Dr. Johnson, said that in pursuance of the instructions given to the committee last year, tenders for the sale of the building had been asked, but nothing further was done. The year, however, had been a satisfactory one. The building was in good condition, all the offices were taken, some of them at an increased rental, and about $10,000 had been paid on the mortgage held by the Canada Life.

Hon. Dr. Sullivan made a motion that a committee be appointed to consult with the Dominion Government and through them to devise some scheme by which to deal more effectively with consumptive patients, and to provide more places for their care. It was the opinion of the meeting that compulsory measures should be passed in each Province, as otherwise they would be neglected.

Several doctors deplored the way in which the public had come to look upon consumptives, shunning them and treating them with fear. The medical profession should do all that was possible to help these unfortunates.

A motion was made by Dr. Thornton to the effect that teachers should be appointed as examiners in anatomy, chemistry

and similar subjects, as they were better able to examine in them than ordinary practitioners who were not continually studying in these particular lines. The motion was referred to the Education Committee.

At the meeting of July 7th the reports of many committees were presented. Dr. Adam Wright's Text-book of Obstetrics was placed on the list of books recommended in the place of the American Text-book of Obstetrics. It was decided to accede to the request of Hon. Dr. Sullivan with reference to Mr. John A. Reid, of Prescott. The Committee on Education did not recommend any important changes in the curriculum.

The last item of business at the meeting of July 8th was the appointment of the following examiners: Anatomy, Descriptive—Dr. T. W. G. McKay, of Oshawa. Theory and Practice of Medicine—Dr. George Hodge, of London. Clinical Medicine—Dr. H. R. Duff, Kingston. Midwifery, Operative and other than Operative, and Puerperal Diseases—Dr. J. R. McCabe, Strathroy. Physiology and Histology—Dr. R. D. Rudolf, Toronto. Surgery, Operative and other than Operative—Dr. W. T. Parke, Woodstock. Clinical Surgery—Dr. J. S. McCullough, Alliston. Medical and Surgical Anatomy—Dr. T. H. Middleboro, Owen Sound. Chemistry, Theoretical and Practical, and Toxicology—Dr. A. R. Pyne, Toronto. Materia Medica and Pharmacology—James S. Sprague, Stirling. Medical Jurisprudence and Sanitary Science—Dr. D. J. Sinclair, Woodstock. Diseases of Women—Dr. R. E. Webster, Ottawa. Diseases of Children—Dr. James Newell, Watford. Pathology, Therapeutics and Bacteriology—Dr. Isaac Wood, Kingston. Homeopathic Fxaminer—Dr. W. A. McFall, Peterboro'.

Regarding the suggestion that an examiner may examine on the subject on which he lectures, the committee reported as follows:

"No teacher shall be eligible for appointment as examiner in the subject which he teaches, but this restriction shall not apply to teachers of Anatomy, Physiology, and Chemistry."

CANADIAN MEDICAL ASSOCIATION.

Halifax, N.S., August 22nd to 25th, 1905.

Preliminary Programme.

President's Address—Dr. John Stewart, Halifax.

Address in Surgery—Dr. Francis M. Caird, Edinburgh, Scotland.

Address in Medicine—Dr. D. A. Campbell, Halifax.

Address in Gynecology—Dr. Howard A. Kelly, Baltimore.

Address in Ophthalmology—Dr. J. W. Stirling, Montreal.

Discussion—Renal and Ureteral Surgery. Introduced by Dr. A. Primrose, Toronto.

Two Cases of Retro Ocular Neuritis—Dr. Geo. H. Burnham, Toronto.

Paper (title to be announced)—Dr. H. A. Bruce, Toronto.

The Symptoms, Diagnosis, Prognosis and Treatment of Neoplasms Affecting the Central Nervous System.—Dr. D. A. Shirres, Montreal.

Chorea, with an Analysis of 130 Cases—Dr. Robert King, Halifax.

Rare Forms of Aneurysm—Dr. Maude E. Abbott, Montreal.

The Buried Suture—Dr. J. M. Elder, Montreal.

Dentigerous Cysts, or the Removal of the Inferior Dental Nerve for Tic—Dr. M. C. Smith, Lynn, Mass.

Combination Operation for the Radical Cure of Inguinal Hernia—Dr. F. N. G. Starr, Toronto.

Two Case Reports—(1) A Case of Chylo-Thorax ; (2) Further Notes on a Case of Myelogenous Leukemia with Disappearance of the Splenomegaly and Myelocytes—Dr. D. G. J. Campbell, Halifax.

Physical and Clinical Researches of Radium—Dr. Myron Metzenbaum, Cleveland, Ohio.

Prostatectomy—Dr. E. W. Cushing, Boston, Mass.

The Surgery of the Stomach in Non-Malignant Conditions—Dr. Geo. E. Armstrong, Montreal.

Dislocations (with lantern demonstration) — Dr. J. Alex. Hutchison, Montreal.

The Fever of Late Syphilis—Dr. Arthur Birt, Berwick, N.S.

Postural Albuminuria of Children—Dr. W. H. Eagar, Halifax.

The Prodromata of Insanity—Dr. W. H. Hattie, Halifax.

The Treatment of Small-pox without Pitting—Dr. Archibald Leitch, St. Thomas, Ont.

Tracheotomy as a Remedy in Severe Whooping Cough—Dr. A. B Atherton, Fredericton, N.B.

Recent Fracture of the Clavicle, with Operative Treatment—Dr. J. W. T. Patton, Truro, N.S.

In addition to the foregoing, several have promised papers, but have not yet decided upon the title of same.

The thirty-first annual meeting of the Mississippi Valley Medical Association will be held at Indianapolis, Ind., October 10, 11, 12, under the Presidency of Dr. Bransford Lewis, of St. Louis, Mo. The annual address in medicine will be delivered by Dr. Arthur R. Edwards, of Chicago, Ill. ; and the address in surgery by Dr. W. D Haggard, of Nashville, Tenn. The mere mention of these names is sufficient guarantee of the excellence of the principal addresses of the meeting.

RESULTS OF RECENT EXAMINATIONS.

Graduates in Medicine, University of Toronto.

The results of the fourth year examinations in medicine at the University of Toronto are as follows:

Medals—Faculty gold medal, W. S. Lemon; first faculty silver medal, G. Ford; second faculty silver medal, W. Merritt; third faculty silver medal, M. E. Gowland.

Scholarships: First year—I., J. G. Harkness; II., R. E. Davidson. Second year—I., G. C. Gray; II., W. C. Shier.

Post-graduate scholarship.

The George Brown Memorial Scholarship in Medical Science—For this scholarship W. S. Lemon, A. G. McPhedran, G. G. Little, S. R. Dalrymple, R. H. Bonnycastle, ranked in the order named.

Final examination—The following received degrees with honors: (1) W. S. Lemon, (2) G. Ford, (3) R. H. Bonnycastle, (4) S. R. Dalrymple and G. G. Little, (6) Miss McAlpine, (7) M. E. Gowland, (8) A. G. McPhedran, (9) W. Roberts, (10) C. Schlichter, (11) Miss M. E. Reid.

The following have completed the examination in the fourth year: W. H. F. Addison, Miss E. E. Bagshaw, Miss E. Beatty, J. C. Beatty, A. C. Bennet, G. I. Black, T. W. Blanchard, R. H. Bonnycastle, D. H. Boddington, G. Boyd, S. J. Boyd, J. H. R. Brolrecht, F. J. Buller, R. B. Burwell, K. C. Cairns, Miss M. B. Callaghan, W. H. Cameron, M. H. V. Cameron, F. M. Campbell, J. A. Campbell, W. M. Carrick, J. D. Christie, R. L. Clark, H. B. Coleman, T. W. Collinson, F. H. Coone, H. H. G. Coulthard, H. D. Cowper, J. M. Dalrymple, S. R. Dalrymple, C. B. Eckel, W. G. Evans, G. Ford, A. J. Gilchrist, W. C. Gilday, E. A. Goode, M. E. Gowland, D. A. L. Graham, G. W. Graham, F. W. Hall, F. V. Hamlin, J. J. Hamilton, E. C. Hanna, E. B. Hardy, J. E. Knipfel, W. S. Laird, Mrs. L. C. Langstaff, W. S. Lemon, G. G. Little, R. C. Lowrey, E. J. Lyon, Miss M. McAlpine, J. McAndrew, E. A. McDonald, F. F. McEwen, J. A. McKenna, G. L. MacKinnon, F. D. McLachlan, G. D. MacLean, C. McMane, A. McNally, A. G. McPhedran, J. H. McPhedran, T. T. McRae, W. W. Medley, W. Merritt, E. M. Middleton, S. F. Millen, J. I. Morris, F. B. Mowbray, A. G. Munns, C. W. Murray, W. J. O'Hara, C. Powell, W. E. Procunier, J. A. Rae, Miss H. E. Reid, Miss M. E. Reid, W. Roberts, A. M. Rolls, C. Schlichter, J. A. Scratch, A. Sinclair, A. B. Smillie, W. J. Smith, F. J. Snelgrove, J. H. Soady, J. A. Speirs, C. E. Spence, A. M. Spohn, C. H. Stapleford, A. P. Stewart, A. W. Thomas, R. W. Tisdale, J. H. Todd, W. C. Toll, S. Traynor, L. A. Trueman, R. M. Turner, F. Vanderlip, A. G. Wallis, F. J. Weidenhammer, J. L. Wilson, A. C. Woods.

MEDICAL GRADUATES, UNIVERSITY OF TRINITY COLLEGE.

Final M.D.C.M. Examination—Certificates of honor: W. J. Dobbie, (gold medallist), R. R. B. Fitzgerald, (silver medallist), E. F. Atkinson.

Class I—R. D. Orok, C. A. F. Caviller, W. J. Corrigan, J. A. Kinnear, W. Dales, H. C. Kindred, C. W. Field.

Class II—A. R. Curtis, H. W. Burgess, G. E. Seldon, T. C. Brereton, J. R. Serson, J. S. Springer, R. J. Carson, B. T. Davey (equal); E. C. A. Reynolds, W. H. Godfrey, G. H. Carlisle, F. W. Rolph (equal); J. A. Gallagher; Miss M. E. Donglan, G. W. Hall (equal); M. J. C. Naftel, H. M. East, J. A. Cullum, W. B. Cassels, J. S. Pritchard, J. Boyce, J. P. Campbell. A. J. Weart, R. M. Cumberland, E. J. Hagan.

Class III—H. Clendenning, T. H. Argue, F. W. McKee, S. J. Staples, G. S. Strathy, A. E. Murphy, J. G. Middlemas, C. A. McKay, Miss G. L. Urquhart, A. W. Keane, C. Howson; S. Blumberger, W. J. J. Brawley (equal); C. D. Lochead, W. A. Peart, H. A. Abraham, J. M. Dale, D. H. Gesner, B. E. Tughen, G. D. R. Black, W. E. Wallwin, G. F. Milne.

Certificates of Honor—W. J. Dobbie (gold medal), R. R. B. Fitzgerald (silver medal), E. F. Atkinson.

DEGREE OF M.D. AND C.M., QUEEN'S UNIVERSITY.

H. J. Bennett, Gananogue; Joseph Chant, Chantry; J. H. Code, Kingston; E. C. Consitt, Perth; J. A. Corrigan, Kingston; W. H. Dudley, Pembroke; J. G. Dwyer, M.A., Kingston; J. Y. Ferguson, B.A., Renfrew; E. A. Gaudet, B.A., Moncton, N.B.; A. W. Girvin, Stella; M. E. Grimshaw, Wolfe Island; R. W. Halladay, B.A., Elgin; J. T. Hogan, Perth; J. M. Hourigan, Smith's Falls; A. H. Hunt, Bridgetown, Barbadoes; M. Lesses, Kingston; M. Locke, Brinston's Corners, T. D. Macgillivray, B.A., Kingston; D. L. McKinnon, Lake Ainslie, N.S.; A. D. MacMillan, Finch; A. E. Mahood, B.A., Kingston; P. A. McIntosh, B.A., Dundela; C. R. Moxley, Kingston; G. R. Randall, Seeley's Bay; M. E. Reynolds, B.A., Athens; R. G. Reid, Kingston; J. J. Robb, B.A., Battersea; W. M. Robb, Lunenburg; B. A. Smith, Hartington; W. A. Smith, Kingston; J. F. Sparks, B.A., Kingston; A. C. Spooner, B.A., Latimer; E. W. Sproule, Harrowsmith; R. W. Tennent, Belleville; Jonn Turnbull, Lowville; C. M. Wagar, Enterprise; F. R. W. Warren, B.A., Balderson; J. W. Warren, Harper; H. J. Williamson, B.A., Kingston.

Medals and Prizes—Medal in Medicine, A. C. Spooner, B.A., Latimer; Medal in Surgery, M. Lesses, Kingston; Chancellor's

Scholarship, J. F. Sparks, B.A., Kingston; Dr. Clarke's Prize in Mental Diseases, equal, T. D. Macgillivray, B.A., Kingston, and E. W. Sproule, Harrowsmith; Dr. Mundell's Prize in Medical and Surgical Anatomy, J. G. Dwyer, M.A., Kingston; Dean Fowler Scholarship (third year), Elmer Bolton, Phillipsville; MacCabe Prize in Pathology, A. E. Baker, Osnabruck Centre; Faculty Prize (second year), F. H. Trousdale, Hartington; New York Alumnæ Association Prize in Physiology and Histology, J. P. Quigley, M.A., Kingston; Hayunga Prize in Pharmacology and Therapeutics, M. L. Burke, Port Antonio, Jamaica; Hayunga Prizes for best dissection made by two students, A. T. Spankie, Wolfe Island, and M. J. O. Walker, Kingston; Wm. K. Warner & Co. Prize for best examination in Anatomy of first year, C. T. C. Nurse, Georgetown, British Guiana; House Surgeons in General Hospital, A. C. Spooner, B. A., Latimer; M. Lesses, Kingston; H. J. Williamson, B.A., Kingston; and Next in order—J. F. Sparks, B.A., Kingston.

Graduates in Medicine, Manitoba University.

M.D.—William Wilson Amos, Robert Naismyth Burns, B.A., Frederick Todd Cadham, B.A., William Andrew Clark, Thomas Andrew Cohoe, George Hector Craig, B.A., Robert Edward Davis, James Duxbury, Albert Ernest Finley, William Jesse Grant, Benjamin Arthur Hopkins, Marsden Frank Ross Irwin, Robert Duncan Kippen, Arnot Leishman, David Park Miller, B.A., Harry Morton Murdoff, Harold Wigmore McGill, Charles James McKinnon, William John Mactavish, William C. Nickle, Richard R. Procter, George Walter Rogers, Albert Henry Rondeau, Herbert Samuel Sharpe, Harry Blackett Stacpoole, David Chester Thompson, Wilfrid Tucker, John Alexander Valens, Frederick Charles Walton, George Albert Woodruff, Joseph Theodore Wright.

C.M.—Willlam Andrew Clark, George Hector Craig, B.A., Albert Henry Rondeau, Herbert Samuel Sharpe.

Graduates in Medicine, Dalhousie University.

Edward Blackaddar, M.A., (Acad.); John Archibald Ferguson, B.Sc., (Dal.); Daniel Robert McDonald, George Gladstone MacDonald, George Arthur McIntosh, Victor Neil MacKay, Mary MacKenzie, Alexander W. Miller, B.A., (St. F. X.); James Alexander Murray, John Ignatius O'Connell, B.A., (St. F. X.); James Adam Proudfoot, Peter James Wallace.

College of Physicians and Surgeons of Ontario.

The following candidates passed the final examination of the College of Physicians and Surgeons of Ontario: J. H. Alford, G. B. Archer, P. Anderson, R. W. Anderson, W. G. Anderson, G. M. Biggs, H. R. Bright, E. C. Burson, J. H. Bennett, F. J. Buller, F. J. Brodie, H. R. Bryan, J. W. Brien, W. A. Burr, W. J. Barber, H. C. Church, W. W. Chipman, W. S. Coady, C. W. Clarke, J. C. Caskey, G. W. Crosby, A. H. Caulfield, W. K. Colbeck, T. A. Davies, E. C. Dixon, A. H. Davies, T. B. Edmison, F. J. Ellis, F. S. Eaton, P. J. Fleming, B. J. Ferguson, J. A. Faulkner, J. Graham, H. E. Gap, M. E. Gowland, Wm. Gibson, T. D. Gallivan, G. W. Graham, T. R. Henry, J. P. Houston, H. O. Howitt, R. W. Halladay, W. H. Harvey, A. L. Hore, G. O. Ireland, J. L. Kane, N. D. Kyle, A. Kinghorn, J. A. Kane, J. F. Killoran, W. H. Keen, E. J. Lyon, A. J. Lalonde, S. M. Lyon, B. M. Lancaster, Eleanor Lucas, A. J. Manard, A. T. Munroe, T. D. MacGillivray, W. E. Mason, A. F. Malloy, P. F. McCue, J. P. McKinnon, P. McGibbon, R. J. McCullough, R. A. McLurg, Geo. McGhie, A. G. McPhedran, D. F. McKinley, R. J. McComb, P. J. McCue, A. McNally, A. D. McClennan, C. C. McCullough, M. A. McQuade, W. E. McLaughlin, J. K. McGregor, A. G. McMillan, S. M. Nagle, J. S. Nelson, J. W. Presault, W. G. Reive, Wm. Reid, F. W. Rolph, G. H. Richards, A. L. Russell, A. B. Sutton, J. B. Stallwood, C. E. Spence, F. J. Snelgrove, A. W. Seighon, J. F. Sparks, E. Sheffield, W. A. Scanlon, G. M. Shaw, R. G. Snyder, A. E. Schulz, F. J. Sheahan, A. Turner, A. D. Unsworth, K. H. VanNorman, F. S. Vrooman, A. J. Williamson, F. C. S. Wilson, T. A. Watterson, B. C. Whyte, J. A. Wright, S. B. Walker.

McGill Medical Faculty.

The seventy-sixth convocation of McGill University for conferring degrees in the Faculty of Medicine was held on June 9th, 1905. The following is the list of names of those who secured the degrees of M.D.

Alguire, A. R., Cornwall; Briggs, J. A., New Westminster; Brown, F. F., Cornwall; Burgess, H. C., Sheffield Mills, N.S.; Chisholm, H. A., B.A., Lindwood, N.S.; Connor, E. L., Berlin; Costello, W. J. W., B.A., Montreal; Covernton, C. F., Montreal; Cumming, A., B.A., Scottsburg, N.S.; Dougan, B. H., Hampstead, N.B.; Dowler, W. H., Billings' Bridge, Ont.; Dykes, W., Nanaimo, B.C.; Finigan, J. F., Oshawa, Ont.; Geddes, R. W., B.A., Deseronto; Gillis, J. H., Metapedia; Grimmer, R. D., St. Andrews, N.B; Hannington, J. W. R., Victoria; Heagerty, J. J., Montreal; Henderson, E. H., B.A., Franklin Centre; Henry, E. G., B.A., Lennoxville; Hume, G. M., Leeds Village; King, S. S,

Albert, N.B.; Leslie, H. A., Souris, P.E.I.; Likely, D. S. B.A., St. John, N.B.; Loggei, W. S., Chatham, N.B.; McDermott, J. H., Gordontown, Jamaica; McKay, M. E., Whycocomagh, N. S.; McLean, J. D., Beaton's Mills, P.E.I.; McDonald, J. A., B.A., Valleyfield; McDonald, J. C., Peak's Station, P.E.I.; McIntosh, G. J., Dalkeith; McLeod, W. A., Finch; McMicking, A. E. T., Victoria; McMurty, S. O., B.A., Montreal; McMurthy, W. C., Port Hope; McNaughton, W. B., St. Raphael West, Ont.; Mason, J. H., Lachute Mills, Que.; Mersereau, H. C., Doaktown, N.B.; Miller, A. P., Chatham; Moffat, C. F., B.A., Montreal; Mohr, F. W. C., Arnprior; Muckleston, H. S., M.A., Perth; Mulligan, J. W., Omemee, Ont.; Munro, J. A., Pugwash, N.S.; Nelles, T. R. E., Simcoe; Prendergast, A. R., B.A., Montreal; Pruyn, W. G., B.A., Napanee; Richards, E. T. F., St. Vincent, B.W.I.; Robertson, A. R., Victoria; Robertson, B. W., St. John, N.B.; Rommel, E., Alma, N.B.; Ryan, L. McD., B.A., Newbury, Ont.; Sawyer, A. R., Roslindale, Mass.; Scott, W. J., B.A., Montreal; Scrimger, F. A. C., B.A., Montreal; Seifedt, F. W., B.A., Quebec; Sinclair, E. E., Summerside, P.E.I.; Styles, W. A. L., Montreal; Smith, W. A., Almonte; Sullivan, J. A., Arnprior; Tees, F. J., B.A., Montreal; Tull, J. A. C., Antigua, B.W.I.; Turnbull, E. G., Branchton, Ont.; Valin, R. E., Ottawa; Viner, N., B.A., Montreal; Waterman, C., Ogdensburg, N.Y.; White, P. G., Woodstock; Wigle, C. A., Wiarton; Wilkinson, W. M., Woodstock; Winder, J. B., B.A., Compton; Winfrey, W. C., B.L., Sault Ste Marie, Mich.; Wood, G. O., Kenmore, Ont.; Wood, W. H., Montreal; Young, C. A., Ottawa.

Bishop's College.

The thirty-fourth annual convocation of Bishop's College for conferring degrees in the Faculty of Medicine was held on 31st May. Degrees were conferred upon the following graduates:

F. W. Aris, C. S. Carmichael, R. B. Cunningham, G. W. Gallatly, F. D. Gill, E. H. Lawson, A. J. Moseley, H. G. MacKerrow, R. H. McRae, M. W. H. Pitman, N. Shacher, G. H. Silverman, H. M. Vartanian and P. Villard.

Obituary.

THOMAS GEORGE JOHNSTON, M.P.

Dr. Johnston, member of the Dominion Parliament for West Lambton, died in Ottawa, July 4th, aged 56. The cause of death is said to have been septicemia, following a scratch on his nose. He graduated from McGill University in 1871. He practised in Sarnia for many years and held many prominent offices in that town, including two terms as Mayor. He was elected to the House of Commons as a Liberal to represent West Lambton at a bye-election in 1898, and was re-elected at the subsequent general elections. He was extremely popular on both sides of the House at Ottawa.

DAVID LESLIE PHILLIP, M.D.

Dr. Phillip, of Brantford, died July 10th at the age of 69 years. He was a McGill graduate of 1861, and was one of the best known physicians in Western Ontario. He was a member of the Ontario Medical Council from 1885 to 1895.

Personals.

Dr. Edmund E. King spent a portion of the month of July in Winnipeg.

Dr. T. H. Bell, of Peterboro', was married June 1st to Miss Minnie Darling, of Toronto.

Dr. G. Sterling Ryerson returned from England on the Allan Line *SS. Bavarian*, and reached Toronto July 5th.

Dr. A. T. Rice, after practising in Woodstock for about twenty years, has removed to New Dundee, near Galt.

Dr. James Roberts has been appointed Medical Superintendent to the Hamilton City Hospital in the place of Dr. Freeman, resigned.

A large portion of the valuable medical library of the late Dr. James Thorburn has been donated to the University of Toronto.

We are pleased to be able to state that Dr. Brefney O'Reilly had quite recovered from his slight illness before reaching Father Point.

The meeting of the Fifth International Congress of Obstetrics and Gynecology, which was to have been held in September, 1905, has been postponed for a year.

Dr. A. B. McCallum left Toronto, July 7th, for Cape Town, South Africa, where he will attend the meeting of the British Medical Association for the advancement of Science.

In a letter received, posted at Father Point, by a friend in Toronto, Dr. Charles O'Reilly reports that he is well and delighted with the officers of the *SS. Montrose* upon which he sailed for England. He wished to be remembered to all the "boys," and expressed his great appreciation for their kindness to him before he left Toronto.

The following physicians have been appointed Associate Coroners by the Ontario Government, Dr. Wm. Arrell, of Cayuga, for the County of Haldimand; Dr. George Eric Chapman, of Sombra, for the County of Lambton; Dr. J. Lane, of North Williamsburg, for the united Counties of Stormount, Dundas and Glengarry; Dr. H. A. Minchin of the Township of Enniskillen, for the County of Lambton; Dr. W. J. McCollum, for the City of Toronto.

Correspondence.

MEDICAL THOUGHTS.

To the Editor of THE CANADIAN PRACTITIONER AND REVIEW.

DEAR SIR:

There is a name, dear to several thousand M.D.'s who, like myself, have no doubt wondered why our Provincial University has not honored with its LL.D. Need I say that this name is that of W. B. Geikie, whose reputation as an able Professor in Medicine for nearly forty, if not more years, and whose zeal for his students' welfare—"ever the students' friend"—have been confirmed and recognized by all true friends of medicine in this Canada of ours? Chauvinism being silenced.

When our universities shall exact for matriculants in medicine the qualifications of the degrees B.A. or the B.S. (in which degrees are embodied a thorough acquaintance with the classics of Greece and Rome), then medicine, and not until then, will have the honored place to which, among men, she is entitled. Why should not our Provincial University become the vexillary in these demands? Is it not to scholarly men most disheartening when the recent graduate says: "I have forgotten my Latin. I never studied Greek. I can not translate my diploma's Latin"?

Our studies go with us through life, and the dear people are expecting scholarship of the highest order among the youngest M.D.'s. Are our young men scholars, such as were Wm. Harvey or Oliver Goldsmith at graduation? History says, "No." Medicine invites and encourages the philomath —men of the type of I. B. Cameron—*inter sapientes medicus.*

Medical journalism is certainly debasing medicine, and an inspection will very easily confirm this assertion. Not only debasing and degrading in character, as relates to advertisements, but in many instances the texts have too often the almanac character, in which a proprietary medicine affords the object held in view. When medical journals are shorn of advertisements, of which two-thirds bear startling evidences of the fakir, the unrelenting parasite, and be even such as were our journals of twenty years ago, the better will

it be for our jealous mistress, medicine, and for our wrinkled purses.

When young M.D.'s possess greater, or equal, knowledge of pharmacy than is possessed by the ordinary druggist, more equal respect for each will be entertained, and Professor Chas. F. Heebner will not be prompted to write, as he most justly and honorably did, "The Dispenser's Difficulties," page 455 in *The Canadian Pharm. Journal.* To see ourselves as others see us, I wish every true M.D. would read this article, which in every sense I endorse and most humbly admit is lamentable for us—and I am neither a Zoilus or an Aristarchus—a very humble hewer to the line, letting the chips fall which way they may.

Have our best men, such of them as are associated with hospitals and are encouraging the trained nurse business, ever considered that much of the information or instruction given nurses is useless, and are arming them with much that they (the M.D.'s) purchased dearly with shekels and midnight oil, and which they (the nurses) will use to humiliate some faithful brother by lessening his prestige and income, without being a trusty aid and servant. The example set by Johns Hopkins Hospital in exacting materia medica, chemistry and anatomy of nurses is one which the enemies of medicine would most decidedly select and follow. Reader, this paragraph is introduced as a reminder, timely, it is hoped, and to illustrate that too many M.D.'s are easy marks and unmindful of the *Fidus in Arcanis* motto emblazoned on the seal of our College of Physicians and Surgeons.

When one, possessed of such distinguishing gifts as a writer and able scholar in the English classics, as is Dr. Fischer, Waterloo, Ont., the author of "Songs by the Way-Side," it is not necessary that one be waiting to get securely seated in the medical saddle; for such men like Weir Mitchell, Osler, Virchow, Paget, and others, even as Angelo, can be masters (even if medicine is a jealous mistress), in allied interests, for medical studies add encouragement, true insight, and awaken our heavenly thoughts in every noble study and research.

The first work placed in my hands for study by my preceptor was the history of medicine and its illustrious fathers. That such a study was beneficial, and is even encouraging, in the writing of these paragraphs, is evident in my thoughts; and why such delightful primary studies are not presented or

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Original Communications.

A CRITICAL REVIEW OF OPERATIONS FOR VENTRO-SUSPENSION OF THE UTERUS.

By S. M. HAY, M.D.

Gynecologist Toronto Western Hospital and Consulting Surgeon Toronto Orthopedic Hospital.

That retro-deviations of the uterus are among the most common conditions found in gynecological patients is well known.

The combined observations of Winckell,[1] Lohlein and Sanger, embracing several thousand patients, show this condition to occur in 17.74 per cent. of all patients of this class. Other authorities place the percentage all the way from 15 to 33.

It might be well to start out early in the consideration of this subject with the fact clearly before us, that simple uncomplicated retro-displacements of the uterus frequently cause no symptoms, and that in the great majority of cases, coexisting pathological conditions are crying more loudly for relief than the uterine malposition.

Although the etiology of retro-deviations of the uterus, as well as physiological function of the various uterine ligaments, are quite beyond the scope of this paper, still I feel justified in referring briefly to them, as a correct conception of these two important points is absolutely necessary in order that we may intelligently consider the various operations in vogue for the relief of this often troublesome condition.

* Read at meeting of Ontario Medical Association.

Etiology.

H. C. Coe,[2] of New York, says that aside from neoplasms the principal cause of departure from the normal position of the uterus, as well as for the distressing symptoms which accompany this change of position, is not in overweighting of the uterus, nor in relaxation of its ligaments, nor in weakening of its pelvic supports, but is rather due to atony of the general abdominal and pelvic musculature. Some women carry large uterine myomata without any pressure symptoms. On the other hand, a flabby young woman may get up in three weeks from an easy labor and a perfectly normal convalescence, without evidence of puerperal lesions or subinvolution, but yet retroversion is present, and is accompanied by such dragging and bearing-down pains that the woman is a semi-invalid. This is from the general loss of tone and not from the local condition.

Many women who have perineal lacerations and a moderate prolapse of many years' standing, do not consult a gynecologist until after the menopause; this is due to the general loss of muscular tone at that period. All the uterine ligaments, of course, participate in this general loss of tone.

Uterine Ligaments.

When we study human anatomy,[3] we find that the principle nature has applied to hold the various organs in place is that of suspension by ligaments. Briefly reviewing the organs of the human body, namely, the heart, the lungs, the liver, the spleen, the pancreas, the kidneys and the intestines, we readily admit that they are hung by ligaments from the bony framework of the body. Not one of them is held in place or receives support from anything placed beneath it. The ovaries and fallopian tubes hang on the posterior surface of the broad ligaments *by their ligaments.* Reasoning by analogy, and basing our conclusions upon the uniformity of nature's laws, the logical inference is that the uterus is held in place by its ligaments, and, weight for weight, no other organ in the body has so many ligaments.

That these ligaments are compelled to support the uterus is clearly demonstrated by the fact that, when the supporting power of the floor of the pelvis is absolutely destroyed by the perineum being torn clear through into the rectum, the uterus remains in place. The only exceptions to this rule are found in cases in which the uterus is displaced and dragged down

by complicating conditions that overcome the resisting power of the ligaments.

The chief action of the round ligaments is not suspensory, but rather to guide and limit the excursions of the fundus. In their quiescent state they hold the fundus to the front, and thereby secure the impingement of the intra-abdominal pressure upon the *posterior* surface of the uterus. With an overfull bladder the fundus uteri is carried quite to the promontory of the sacrum, and the intra-abdominal pressure is found to impinge upon the *anterior* surface of the uterus. The round ligaments prevent the uterus from being gradually crowded down into a permanent retro-displacement.

The main functions of the broad ligaments are to furnish a support for the uterine appendages, which are hung upon its posterior face, and to furnish safe conduct to the blood vessels in their course to the uterus.

The chief purpose of the utero-sacral ligaments if not their sole function, is to retain the uterus in its normal position. The two sets of ligaments—the utero-sacral and the utero-vesical—taken together, form a sling of tissue reaching from the promontory of the sacrum to the symphysis, in which the uterus hangs suspended by their attachments just above the internal os. The utero-sacral ligaments prevent descent of the uterus as a whole, while the utero-vesicals control the to-and-fro, or antero-posterior motion.

Various Operations.

A great many operations, some fifty in number, have been devised for correcting retro-deviations of the uterus. Some of these are worthy of mention, although many of them have practically fallen into disuse.

The operations of vaginal fixation of the uterus, operations upon the anterior and posterior vaginal walls, as well as operations done *through* the anterior and the posterior cul-de-sac; for example, on the utero-sacral ligaments and on the round and broad ligaments, do not properly come within the range of this paper, so will only receive a passing notice.

We now come to the consideration of the two most reliable operations employed for the relief of these backward displacements of the uterus—the two which have successfully stood the test of time and experience—the two which receive greatest prominence in our most recent text-book literature. I refer to (1) Alexander's operation of shortening the round ligaments, and to (2) ventro-suspension of the uterus. Most, if not all,

of the other operations are only on probation, while many have have been distanced in the race or fallen by the wayside.

Bland Sutton,[4] in the 1904 edition of his work, says: "Hysteropexy and the operation for *shortening the round ligaments* are the two principal methods of dealing with this condition.

Penrose,[5] in his work of 1904, says: "The two operations that have deservedly met with the greatest favor are *ventro-fixation or ventro-suspension of the uterus* and Alexander's operation."

Dudley,[6] in his book of 1904, mentions: (1) Alexander's operation, (2) abdominal hysterorrhaphy, (3) vaginal hysterorrhaphy.

Garrigues,[7] in his Gynecology of 1905, only mentions: (1) Alexander's operation, (2) vaginal shortening of the round ligaments, (3) shortening the round ligaments from the abdominal cavity and (4) ventro-fixation, or suspension of the uterus.

Montgomery,[8] in his text-book of 1900, says: "The operations for the correction of retro-displacements of the uterus consist in manipulation of the natural ligaments, such as the shortening of the round ligaments, which may be *extra-peritoneal or intra-peritoneal,* ventro-fixation or *suspension* of the uterus, and *vaginal operation* for fixation.

Reed,[1] in his text-book on Gynecology of 1901, includes the various operations under three headings: (1) Shortening the round ligament, (2) ventral fixation or *suspension,* (3) vaginal fixation.

Herman,[9] of London, in his work on Diseases of Women of 1898 (p. 157), mentions three surgical methods of dealing with retro-deviations of the uterus: (1) Vaginal fixation, (2) Alexander's operation, (3) ventral fixation.

You will observe that all the authorities quoted mention Alexander's operation and ventro-suspension of the uterus, while some add other operations to the list.

Alexander's Operation.

Alquie,[10] a Frenchman, conceived the idea of shortening the round ligaments for retroversion in 1840. He did not operate. Alexander, of Liverpool, performed his first operation in 1881. Adams, of Glasgow, operated independently two months later than Alexander, but published more than six months earlier. But I shall not go farther into the history of this operation, neither shall I consume time by a description

of its *modus operandi,* both of which may be far better obtained by reference to any standard work on the subject.

Garrigues[7] says: "This should be the operation of choice, but it is contra-indicated if the uterus is held back by adhesions, or in old women in whom the ligaments become atrophic."

Herman, of London, says: "Alexander's operation permanently cures retroflexion of the uterus, but it does not cure prolapse. If cystocele is associated with retroflexion, your patient will not be cured. It is not without danger, which comes from the difficulty of the operation, difficulty in finding the ligaments. In many cases operators have failed to find them, and fatal injury has been inflicted in the search. The pulling on the ligaments interferes with their blood supply, and resulting inflammation may lead to deep suppuration which may spread to the peritoneum with fatal results; or the suppuration may come toward the surface, leaving a weak canal. Later, the ligaments may slip back and the uterus become displaced again. A canal thus weakened by suppuration favors hernia; in fact, the inguinal canals cannot be wholly or partly opened up without favoring hernia.

Reed[1] considers Alexander's operation indicated in any backward or downward displacement in which there are no adhesions. Where the uterus is greatly enlarged and the utero-sacral ligaments are also relaxed, very little benefit can be expected to follow Alexander's operation alone.

There are several complications to be taken into account. Adhesions in the inguinal canal sometimes effectually prevent the drawing out of the cord. We may encounter a delicate cord. In a few instances the cord will break. In some instances it has been found not to run through the inguinal canal.

Penrose[5] says the field of this operation is very limited. It is not applicable when there are adhesions, nor when there is disease of the tubes or ovaries requiring operative treatment.

Montgomery[8] mentions the disadvantages of Alexander's operation as: (1) Two incisions have to be made. (2) The operation is limited in its application. It is only in those cases in which the uterus is mobile that we can practise the procedure. (3) The round ligaments are sometimes so attenuated as to be of little use in maintaining the organ. In one operation of his the ligament on one side was entirely absent. (4) In cases of infection the infected ligament may slip back, carrying infection in beneath the peritoneum.

Pryor[11] does not endorse Alexander's operation. The operation has two disagreeable sequelæ; hydrocele of the ligament and inguinal hernia. He has collected fifty-four cases of hernia resulting from the operation. He says curettage and properly performed plastic work will cure uncomplicated retroposition whenever Alexander's operation can, and without its accidents. Pregnancy is not influenced by it.

Dr. E. C. Dudley[6] says, in the last edition of his Gynecology, that: Alexander's operation is only permissible when the operation is not complicated by a tumor, inflammation of the uterine appendages, adhesions or other impediments to replacement. The field, therefore, is not very great.

Ventro-Suspension.

The operation of ventral suspension[10] of the uterus will be always inseparably connected with the names of Ohlshausen, of Berlin, and Kelly, of Baltimore, for having the genius of proposing, executing and describing a systematic operation; although a similar operation had been previously performed by other surgeons in isolated cases and with indefinite plans. For a description of the technique of this operation I would refer you to Kelly's "Operative Gynecology," or to some other of the many excellent works on the subject.

Herman[9] says: "In retroflexion with descent, in which pessaries fail, ventral *fixation* is the only treatment that will cure." He has known patients who have been invalids for years made able to lead active lives by this operation.

Reed[1] speaks of *fixation* and not of *suspension*, and says it is limited to those cases in which pregnancy is impossible, and to cases of very severe prolapse with great relaxation.

Penrose[5] says the operation that at present seems to possess most advantages for the cure of those cases of retroversion of the uterus that cannot be cured by the pessary, is the operation of ventro-suspension of the uterus. If this operation is properly performed, the course of subsequent pregnancies and labors seems to be in no way impeded.

Montgomery[8] asserts that ventro-fixation permits the inspection and treatment of intra-peritoneal conditions which is of great advantage. A disadvantage is that it has been found to interfere in some degree with gestation and labor. He also mentions a case where a large portion of intestine slipped behind the band of adhesion, became strangled and caused death.

Garrigues[7] says it is better to shorten the round ligaments than to fasten the body of the uterus to the abdominal wall, as the pseudo-ligament has more than once led to ileus and death.

Pryor[11] thinks ventral fixation objectionable because it pulls the body of the uterus out of the pelvis into the abdomen. He also says it straightens out the utero-sacral ligaments, causing them to come together and constrict the rectum. He is of opinion that the operation has little effect upon pregnancy, but conduces to faulty presentations of the fetus and to dystocia.

Dudley[6] states that the contra-indications of Alexander's operation become at once the indications for abdominal section and suspension. Hence the field for this operation is much wider than for the round ligament operation.

Bland Sutton[4] says hysteropexy and the operation for shortening round ligaments are the two principal methods of dealing with this condition, but he strongly prefers hysteropexy, as it is the more satisfactory operation and gives excellent results. In a small percentage of cases of hysteropexy it has been followed by difficulties during labor. These risks are small when the attachments are properly made.

Howard Kelly[12] suspends the uterus only in cases of persistent retroflexion which refuse to yield to similar plans of treatment through the vagina, and then only when the discomforts of the retroflexion are sufficient to interfere seriously with health.

The two principal objections made against the operation of ventral suspension of the uterus are its supposed influence upon pregnancy and labor, and the risk of a portion of the intestine slipping behind the suspensory ligament, becoming obstructed and thus causing death.

Let us notice what some authorities say on the subject. Howard Kelly[12] remarks: "I have heard from 49 married women upon whom I have performed my suspensory operation at a date sufficiently remote to form a judgment as to the result. They reported 14 cases of pregnancy, and in only one of these was there any complication attributable to the suspensory operation. In that case the uterus was suspended, not by the fundus, but by the ovarian ligaments. The womb became infected, the ligatures were discharged, and the uterus was bound to the abdominal wall by *broad dense adhesions.* This woman had an instrumental delivery and recovered.

Penrose[5] and his assistants did ventro-suspension 310 times in seven years; 211 of these women made written reports of their condition. Of the 20 women who became pregnant and went to full term, the course of pregnancy was normal, and the

children were all born alive. One woman had a prolonged and difficult labor, though the forceps were not used. In one case forceps were used to deliver a 10-lb. child, who presented in occipito-posterior position; in the remaining 18 cases labor was normal. Eight cases out of this series miscarried. The operation of ventro-suspension seems to have had nothing whatever to do with producing the miscarriages. The author still continues to perform this operation with equally satisfactory results, and says if this operation is properly performed, the course of subsequent pregnancies and labors seems to be in no way impeded. The operation should always be accompanied by perineorrhaphy and trachelorrhaphy when these operations are required.

Beyea[13] makes the statement that there is scarcely an operation in surgery which has been subjected to more adverse criticism than ventro-suspension; no operation which has been more often incorrectly performed and its objects more often misunderstood.

We hear from one quarter that as a result of the abdominal adhesion, the course of gestation has been greatly interfered with; we also hear of the induction of labor, and even in a few cases Cesarean Section has been necessary, that labor at term is difficult and complicated, and that abortion or miscarriage often occurs. It is said that an intestine has caught behind the suspension ligament and intestinal obstruction, resulting in death, has occurred. It is also said that recurrence of displacement frequently takes place.

Beyea[13] says: "Regardless of these criticisms, which must be accepted as facts, and which form the standpoint of the writer's condemning the operation, in my experience of eleven years in 465 cases, ventro-suspension of the uterus has ever proven an efficient operation, has never been complicated and never produced abnormal gestation or complicated labor."

I believe in the large majority of cases where failures occur or where serious complications arise, it is the fault of the particular method of ventro-suspension performed by the operator and not the fault of the operation itself. A positive fixation and not a suspension has been performed. Other operators fail to obtain a sufficiently strong suspensory ligament, and displacement or failure follows.

If the proper conditions of this operation are secured, then the complications of gestation and labor will not and cannot occur.

Dr. Beyea[13] wrote letters to the 465 women operated upon

and had replies from 272 of them; 94 per cent. of those who replied were either restored to excellent health, or good health, or improved in health as a result of the operation of ventro-suspension alone, or combined with other operations required on the appendages or perineum and cervix. About a dozen of the women said the uterus had gone back, but in an examination of two of these, the uterus was found in good position. The report of recurrence came chiefly from women who had since borne children.

Beyea reports a personal knowledge of five cases of recurrence. In three it occurred before the patients left the hoshital, in two as a result of coughing in an attack of pneumonia, and in the other the attachment was separated by the resident physician in removing the sutures from the cervix. In another, the woman, regardless of advice, took up heavy household duties immediately after returning home, lifting an 18 months' old child several times a day. In the fifth case the uterus was found retroverted to the second degree, and on opening the abdomen again the ligament was seen attached to the *anterior* surface of the uterus well below the fundus, which doubtless accounted for the recurrence.

I here quote from Dr. Beyea[13]: "The important question, the influence of this operation on the course of gestation and labor, I wish to particularly call to your attention. Of the 272 women, 153 are now at the time of this study, married; this number including such as have had operations on the tubes which might render them sterile; 119 are single or widowed, or the operation rendered them absolutely sterile.

"Of the 153 married women, 41 have been pregnant since operation; 37 have gone to term and borne a living child; 5 have twice borne a child; 2 have given birth to twins; 1 twice. One woman died of eclampsia following a normal labor; in 4, instruments were used at birth; once for posterior rotation of the occiput; in 1, there was an unusual, but not sufficient to be termed post-partem, hemorrhage: in 2 the labor was long and difficult, one lasting three days, and in one there was hemorrhage during pregnancy, the cause of which was not determined. In none of the 47 labors as described by the patients and the attending physician was there complication which could be attributed to the operation. It was thought possible that the operation was the cause of the hemorrhage in the one case following labor, but there was no proof.

"As to the other complications, the use of forceps and long labors, they are complications which are not infrequent where

no operative procedure had been performed upon the uterus, and are not more than normally frequent here.

"Nine of the 153 women have aborted or miscarried; 5 twice; all before the sixth month; 9 or 14 miscarriages or abortions, considering those induced, for these cases represent all classes of women, is not more than the average percentage in 153 women.

"There were no operative complications, no instances of intestinal obstruction in any of the 465 women. There was 1 death, which occurred 18 hours after a cervical dilatation and ventro-suspension of the uterus, the operation lasting 30 minutes. The post-mortem failed to discover the cause of death, and the conclusion was that death resulted from surgical shock, for there was a rapid, failing heart action. The mortality, 1 death in 465 cases, was therefore a little less than one-fifth of 1 per cent.

"Considering that this experience extends over a period of 11 years and represents an accurate study of 465 cases in which the special method of ventro-suspension of the uterus described was performed, with the fact that 41 of the 153 married women have become pregnant, gone to term and passed through normal labors; that but 9 of the same women have miscarried; that there have been but 5 recurrences of the displacement, always for a sufficient and active cause, and that 95 per cent. of the 272 women responding to communication report complete relief of symptoms or improvement in health as a result of the operation, the conclusion is warrantable that this particular method of performing ventro-suspension is completely satisfactory and its results most gratifying. Its mortality being one-fifth of 1 per cent. in our experience, makes it practically free from danger to life, and no objection can be offered for this reason. Its performance is most warrantable and its sequelæ less frequent than the extra-abdominal operations, such as the Alexander-Adams."

Personal experience makes stronger impressions upon the mind than text-book literature. I have done the operation of ventral suspension of the uterus 24 times in my own practice, and have probably assisted my colleagues in an equal number, making in all an experience of about 48 operations. I have carefully preserved notes of all my 24 cases. In 3 of them I had occasion to reopen the abdominal cavity at a period of nearly three years after the suspension had been done, 1 for appendicitis, 1 for ovarian cyst, and the other for disease of the ovary. In each case the uterus was in good position with a suspensory ligament from 2 to 4 inches in length still

present and apparently on duty. In one of these three, the young lady had got married and had a child at term, the labor was normal, both mother and child did well. On opening her abdomen the second time, I had the opportunity of demonstrating to my private gynecological class a uterus in normal position and a suspensory ligament of between three and four inches in length, which had evidently participated in the involution of the uterus, which normally followed her delivery.

In only one instance, so far as I can learn, has redisplacement occurred. This was in a stout lady 44 years of age. The uterus was large and heavy—sound, passed 3½ inches. There was also prolapsus uteri; a long, thick lacerated cervix protruded 1½ inches outside of vulva. It was of long standing. She was curetted, cervix repaired and ventral suspension performed. Patient did well for over one year, when a sudden fall on the buttocks was blamed for causing redisplacement.

Personally, I feel that in her case the special operation was not well chosen. I should have amputated the cervix, tied off the tubes and performed a positive ventral *fixation.* A long cervix has not sufficient room in the vagina to lie comfortably across that canal, so aided by the action of intra-abdominal pressure on the long cervix, the latter gradually assumes a position in the axis of the vagina, the fundus uteri falling backward, so in this way retro-displacement and prolapse again occurs.

Choice of Operation.

In putting experience, practice, theory and study of the lilterature together, I come to the following conclusions:—

That the conscientious, resourceful operator will be bound by no rule, but will aim to suit the operation to the particular case in hand. If for any reason the posterior cul-de-sac has been opened, an attempt should be made to correct a retrodisplacement by one of the methods which fix the cervix well back in the hollow of the sacrum—Pryor's for example.

That Alexander's operation should be the operation of choice in all *uncomplicated* cases. That complications are the rule, consequently this method is very limited in its field of usefulness. That uncomplicated cases are those in which any operation is least indicated. That all methods of shortening the round ligaments by doubling them up from within the peritoneal cavity, utilize the strong portion of the ligament leaving on duty the weak, stretched portion within the abdominal wall to stretch again in course of time.

That ventral suspension—not fixation—when properly performed in combination with other procedures, does relieve the malposition, and prevents, more surely than any other method a recurrence of the same. Its dangers are small, if any, in subsequent pregnancy and delivery. It has the advantage of being quickly and easily performed, and is applicable in all cases where any other method is, and in very many cases it is the only method that offers a reasonable hope of permanent cure.

That those who criticize most severely the two time-honored operations—Alexander's and ventro-suspension—are those who have some pet operation of their own, or a modification of some one else's to extol.

In conclusion, Mr. President, I am here to make the statement that while ventral suspension, in common with every other human endeavor, has its failures as well as its successes, it more nearly approaches a universally applicable operation for retro-deviations of the uterus than any other method known to the medical profession.

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RESECTION OF THE SPLENIC FLEXURE OF THE COLON, MALIGNANT DISEASE, WITH EXHIBITION OF PATIENT AND SPECIMEN.

By INGERSOLL OLMSTED, M.B., Hamilton.

This patient, Mrs. X——, was seen with Dr. Arnott, of Hamilton, on the 6th of March, 1904. He informed me that she had been taken seriously ill three days previously with cramps in her abdomen, sickness of the stomach and vomiting. She had not had any movement of the bowels for three days before her attack. Her abdomen became distended and, in spite of purgatives and high enemas there was no free evacuation. She had had some fever and increased frequency of pulse. When I saw her she was much better, the bowels had moved freely and she said she was nearly well.

Her history obtained, is as follows: With the exception of one sister, who died of a tumor of the womb, her family history is excellent.

She has had nearly every disease of childhood. She married, had two children, but no miscarriages. During the last 18 years she has been troubled with asthma. The menopause occurred in her forty-sixth vear, and was unaccompanied by any particular unpleasantness. She has always worked hard, has been a hearty eater, but was never troubled with any disturbance of the digestive tract till two years ago.

The present illness began quite suddenly in January, 1902. She awoke one morning with crampy pains in the abdomen, nausea and vomiting. The pains were felt especially around the naval and left hypochondriac region. There was some abdominal distension and constipation of the bowels. The bowels acted after a large enema had been given, and fresh blood was seen in the stool.

During the last two years she has had frequent attacks like the one described, which lasted from one or two hours to two and three days. Relief came as soon as the bowels moved, and almost invariably some fresh blood was found in the stools.

Two of these attacks were quite severe, one in October, 1903, which lasted about ten days, and another in January, 1904, which lasted two weeks. It was very difficult to get the bowels moved at that time, and she had considerable fever.

* Read at the Ontario Medical Association, Toronto, June, 1905.

Between the attacks she would have about two stools daily, but at no time did she have a large, well-formed motion. When one of her attacks appeared, and enemas were given, small, hard fecal masses about the size of marbles came away. During the attack in January, 1904, Dr. Arnott felt a lump, about the size of a walnut, in the left side of the abdomen, between the last rib and the ilium. After the attack this lump could not be felt. Her weight had diminished about thirty pounds during the last two years, and she has been almost free from her asthma.

She is a medium sized woman, fairly well nourished. The lungs are slightly emphysematous, heart sounds normal, arteries somewhat thickened and urine negative.

The abdomen is not distended and no peristaltic waves are visible. The liver has normal dimensions. On palpation, a lump about the size of a small orange is felt in the left flank, just under the edge of the ribs. It possessed very little mobility.

A diagnosis of cancer of the colon was made, and operation advised.

She entered the City Hospital and was operated on on the 12th of March, 1904.

Under ether anesthesia a long oblique incision was made, following the course of the fibres of the external oblique muscle, just to the inner side of the tumor. On opening the abdomen this tumor was found to be in the upper part of the descending colon and attached to the inner part of the transverse colon, the splenic flexure being free. The great omentum was attached to and covered the inner side of the growth. No grandular involvement could be felt.

The mass, including the distal end of the transverse, splenic flexure and upper end of descending colon, was freed from its attachments, clamped off with Kocher's intestinal clamps and removed. The two divided ends of the bowels were brought together and an end-to-end anastomosis was made by means of sutures over a large Robson bone bobbin. The coats of the proximal portion of the bowel were very much hypertrophied. Three rows of sutures of fine black silk were used in making the anastomosis, and the omentum was also stitched over the junction line. The abdomen was closed without drainage.

There was very little shock following the operation, and convalescence was without incident.

She returned to her home at the end of three weeks, and has gained in health and weight ever since.

Strange to say, her asthma has returned, and now it is the only thing she complains of.

On opening the bowel and cutting through the tumor, the growth is found to almost completely close the lumen of the intestine, only a small opening, which would scarcely allow the passage of the small finger, being left through the centre of the growth. The upper surface of the growth is ulcerated, and lying free in the bowel above this is a plum stone. This had evidently acted like a ball valve. The patient says she remembers having swallowed a plum stone the previous fall.

The tumor proved to be a cylindrical-celled epithelioma.

CONSTITUTIONAL TREATMENT OF TUBERCULOUS DISEASE IN BONES AND JOINTS.

By W. E. GALLIE, M.B., Toronto.

The treatment of surgical conditions among children consists very largely of a struggle with tuberculosis. A study of the statistics, compiled at the Hospital for Sick Children, since 1891, shows thot disease of the hip, spine, and knee, constitutes fully three-fourths of the cases admitted to the surgical department. The presence of so large a number of these cases in our hospitals has led to a fine development of the orthopedic treatment of the disease, and has also directed our attention to the great good that can be accomplished by the judicious employment of the therapeutic agents that nature has placed in our hands. It is by the employment of these latter forces that we hope to raise the vital resistance to such a degree as to arrest the advance of the disease, and to allow the process of regeneration of fibrous tissue to finally obliterate it altogether.

The most important of the natural forces is to be found in the open air. Oxygen is the universal antitoxin, and therefore, the purer and more plentiful the supply, the higher will be the vital resistance. Experience has thoroughly proven this theory, as the hospital records conclusively show. For example, the following history:

A boy, aged ten years, was admitted to the Hospital for Sick Children suffering from knee-joint disease. The joint was in the acute stage, extremely painful when touched or

* Extract from paper presented to the Post-Graduate Society of Toronto.

moved, and manifesting the usual deformity of flexion, with spasm of all the surrounding muscles. His extreme pallor and emaciation clearly showed the deep constitutional inroads that had been made by the prolonged absorption of toxins and the constant presence of pain. For a month he underwent the usual treatment for this condition, but in spite of the fact that everything was done for him that orthopedic science and dietetic and tonic treatment could devise, he practically made no progress toward recovery. He was then transferred to the Lakeside Home on Toronto Island, the summer home for the convalescents from the city hospital. The effect of his outing was most remarkable. In six weeks he had gained fifteen pounds in weight, and the pain, of which he had been a constant sufferer, had completely disappeared. Examination of the knee showed that all the acute symptoms had passed away, and from that time onward he continued to steadily progress. At the end of the summer he was discharged from Lakeside, wearing a Thomas splint, practically completely cured.

But it is not isolated cases that we are obliged to resort to to demonstrate the value of the fresh air treatment. The history cited above is simply an example of the results obtained in the great majority of these cases. During the winter months there is in many instances a considerable loss of ground, and at best a mere arrest in the advance of the symptoms, while in the summer, when the patients are at the Island, there is invariably marked improvement.

The method of administering the fresh air treatment is very simple. The Lakeside Home is so constructed, that for each ward, there is a verandah of equal size, facing either to the south, east or west. On these verandahs the patients lie in their beds, both night and day, only being removed to the ward in stormy weather. Awnings are arranged for protection from the sun during the hottest part of the day, and to shut out the wind on gusty nights, but in the mornings and late afternoons a sun-bath forms part of the routine treatment.

This method of dealing with the disease seems to be an ideal one, and gives the only hope of checking its advance, no matter in what part of the body it may be found. It is the suggestion of this paper, that whenever possible, tuberculosis of bones and joints be treated in sanitaria, or if this is impossible, in the homes of the patients in exactly the same manner as is outlined in the modern treatment of tuberculosis of the lungs. It cannot be doubted that many lives are being lost or rendered useless by the non-appreciation of the benefit to be derived from the proper application of the principles of hygiene, and

the sooner the public becomes acquainted with the splendid results obtained at the Lakeside Home, the sooner will the long list of disastrous results obtained from ordinary treatment be diminished.

Other points in the general constitutional treatment may be referred to more briefly. Bodily exercise is naturally beneficial. This brings up the great question of the relative merits of tht rest, and ambulatory treatments of the disease. By some it is advocated that absolute rest of the limb is imperative until far on into the stage of convalescence. Others say that if the patient were allowed up early, with as efficient fixation of the joint as is possible by the use of apparatus, this stage of convalescence would be reached much earlier. This seems to be a question to be solved solely by a consideration of the class of the patient, and the means at hand for establishing the open air treatment. In New York, where an enormous out-door practice is carried on among these patients, it is the custom to put them at once into ambulatory splints and to let them walk about in the open air, and thus to some extent to counteract the effect of their unsanitary homes. Here in Toronto, where we are able to deal with all such cases within the hospital, a median course is pursued, a course which is probably the ideal one. For the first four or six months ,the patient is confined to bed, absolute rest in the joint being enforced. If at the end of that period, the acute symptoms have fairly well subsided, he is allowed to get about with the aid of an ambulatory splint. There is an indefinite point in the progress of a case, before which it would be risky to allow the jarring which must be encountered in walking, but after which, it is better to employ the aid to convalescence, of allowing the patient to walk about and enjoy some healthy exercise. The risk of allowing a patient up too early is demonstrated by the frequency with which these patients return to the hospital, within a month or so, with all the acute symptoms as pronounced as ever.

But although it has been decided to keep the patient for some months in bed, this is no reason why he may not have a certain amount of exercise. At the Children's Hospital, the patients are allowed to use their arms to the fullest extent, and often calisthenic exercises are practised to develop the muscles and lungs. Breathing exercises are of great benefit, increasing the vital capacity of the patient, and insuring more perfect oxygenation of the tissues. Combined with these, massage is useful, taking the place to a certain extent of the vigorous muscular contractions of a healthy child.

With regard to diet, the methods employed in the Sick Children's Hospital have nothing new to advance. The principle which guides the choice of diet is the one that prescribes for patients of diminished vitality, nutritious and easily digested food. The idea that it is wise to stuff a tuberculous patient and load him up with a weight of fat was long ago abandoned, since this process only increases the auto-intoxication, the very thing we wish to avoid. Eggs and the rare meats, therefore, constitute a large part of the solid foods, and milk has a prominent place among the fluids. It is often very difficult to get these patients to eat anything at all, and in these cases the finest art of cookery must be introduced to stimulate the flagging appetite.

Of the use of drugs as tonics little can be said, except that it is not wise to give these patients any medicines that are likely to injure the stomach and the process of digestion. Iron is probably of some use in correcting the anemia which develops in this, as in all wasting diseases, but care must be employed in its use, because of its effect on digestion. Cod liver oil and the hypophosphites are often administered, but we are unable to report any brilliant results from their use. It is not from the use of drugs that we can hope for a rise in the vital resistance, but from the judicious and persistent employment of the sun, the air, and good, nutritious food.

Selected Article.

THE PREVENTION OF APOPLEXY.

By T. CLIFFORD ALLBUTT, M.D., F.R.S.,
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From the time of Hippocrates physicians have aimed, by methods better and worse, at the forecast of disease. They have perceived that successful forecast is not only of prime utility in the particular case, but is the test by which they must be judged concerning their knowledge of the causes of disease, a knowledge in which must lie, in the long-run, our command of the means of cure. And if, leaving the particular instance, we turn our eyes towards the broader incidence of disease, we shall see that a knowledge of causes is the only way to what is far more than individual cure, namely prevention. On such considerations as these we may be content to be judged to-day. To the great Italians of the early renascence we owe far more than we are wont to acknowledge. To them we owe not, indeed, Harvey himself, but surely the spirit and the teaching which made Harvey what he was; and as in Harvey physiology began, so pathology had its chief source and inspiration in Morgagni.

Virchow has said that the key to Morgagni's reform was the substitution of the question, Where is disease? for What is disease?—the substitution of an enquiry into the place and order of the phenomena, instead of that which had ruled the Middle Ages, the enquiry into the essence of disease. Since Morgagni's day the revelations which have rewarded this change of attitude and method have been prodigious, and not in the direct results of anatomical search only. By the new method wide and deep changes have penetrated thence into the fields of clinical and therapeutical knowledge. In therapeutics, for instance, the distance between Morgagni and Wilks was as great as in morbid anatomy itself. The reform was sound, useful and progressive, almost above our appreciation. Yet, like all reforms, it has had its defect or partiality. To ask, as Virchow put it, Where is disease?—unless we give an infinite extension to the word "where"—is to convey too stationary a sense to the problem; to make it too static. Among the consequences of this limitation was a certain fatalism, both of pathology and of therapeutics; and this the more that, as in

the vast majority of cases the necropsy does not take place till the disease has wrecked the organs affected, the mind is impressed by the destructive and inevitable aspect of the event, rather than by the processes, often very protracted and insidious, in which the event was generated. It is recognized on all hands that from this static attitude of observation prognosis and therapeutics suffered much loss; and during the last decennium the acuter observers of clinical phenomena have been engaged in encouraging a less fatalistic prognosis in diseases of the heart and kidneys, in tuberculosis, and in many other maladies. In diseases of the nervous system, as we should expect in the sphere of greatest complexity, one in which the causes are more profoundly withdrawn from direct observation, this fatalism still oppresses the physician. Where these diseases are seated is but too apparent; but by what processes they accumulate is as yet concealed from us. Now the ravages of disease are grievous enough without the despondencies of the post-mortem room. We shall gain heart, and the patient will gain hope, if we turn our eyes for a little while from this theatre to the clinical laboratory, in search of the genesis of disease; in an endeavor to detect the first small beginnings, which, unchecked, issue in such miscarriage. We shall not indeed go back to enquire, What is disease? but we shall not stop at the morbid anatomist's question, "Where is disease?"; we shall ask farther, How is disease?

Clinically, we have given up the catastrophic notion of disease; we have learned that its catastrophies are sudden only to him who is blind to their approaches. The springing of a mine is astonishing to its victims, but is no surprise to the sapper who laid it, who carried the clues to his tent, and at the just moment touched the button. The very name of apoplexy —in Latin, *sideratio*—signifies a stroke as if from the stars; the victim is, as it were, planet-stricken. And so it appeared to our fathers who gave it the name, and to many a generation after them; nay, so it appears still to the inexpert public. Yet nowadays the pathologist himself—possessed at first with fatalist submission, silent before the violent outbreak of blood into the delicate web of the brain, pondering in helpless dismay what man could have done in face of such a stroke—has begun to try to get behind the catastrophe. Now he is demonstrating to the bystander that granular kidneys, perhaps,—at any rate damaged arteries, and an abnormal heart, are precedent conditions. So that the event is surprising only to the unwarned. At this stage the eager mind questions farther and farther—

how comes it that these arteries, these kidneys, this heart, are so changed? For all this is no swift infliction; it signifies modifications implying a long duration and gradual progress, modifications which again cannot have been without their insidious causes to take us farther back still; and so on. Thus, as in tuberculosis, we are laying aside the attitude of amazement or resignation, and are putting on that of the scout; if perchance we may detect the first approaches of the enemy, or even by timely diplomacy prevent him before war is declared. We are receding from the fatalism of the early pathological anatomists, and returning to that desire for more and more timely forecast which distinguish the schools of Cos and Cnidus; the forecast in which lie the proof of scientific knowledge and the means of prevention.

At the present time we are enthusiastic in the foreknowledge and prevention of tuberculosis; we are waylaying the epidemics in their courses; we are ardently pursuing the tracks of cancer; and as one by one we disarm them, we are gathering understanding and hope. It is my desire to-day to bring you to a like encouragement in respect of the apoplexy of cerebral hemorrhage.

That cases of "stroke" are not all the same kind, we have known for some time past; especially since the researches of Kirkes. On the cases in which healthy arteries are blocked by casual embolism, however, I have not now to speak; moreover, we will set aside all cases in which the effects of extrinsic poisonous or bacterio-toxic agents are concerned. We are to consider those in which disease of long-standing is found in the arteries about the seat of the hemorrhage. In a large number of these cases, however, we find no effusions of blood, or none in bulk, at any rate; the circulation of the brain is arrested, but by a silting up of the arteries rather than by rupture of them. Moreover, in these cases we find that the heart, abnormal as it may be, does not indicate present or previous hypertrophy; often indeed an atrophy. We find too that the arteries of these cases often present calcification of the middle coat, while the body at large is one in which senile change is far advanced, and probably not advanced prematurely—the patients do not run between sixty-five and seventy, but between seventy-five and eighty-five. In apoplexy by cerebral hemorrhage, the outbreak in the brain is no fault of this organ, but wholly its misfortune. By apoplexy we lose day by day able citizens whose mental powers before the fatal seizure were intact both in vigor and quality. The pathological signs are

those of some slow injury to the blood-vessels; but the heart is or has been hypertrophied, and the result of the conditions is rupture rather than occlusion.

Now what do we know, or what can we find out, concerning these awful visitations? For the last quarter of a century I have taught that in a large number of cases of sanguineous apoplexy the kidneys are not granular; and if in some of them they are fibrous, they do not partake of the nature of chronic Bright's disease. This I affirm on the condition of the secreting structures of the tubes, which dwindling or crushed as they may be here or there, present no foci, or traces of past foci, of degeneration or necrosis. Professor Osler has given his valuable judgment in favor of the proposition that a large number of cases of the kind we are contemplating are not attributable to chronic Bright's disease. Now, my belief is that if we can carry our analysis of causes far enough back, we shall reach a junction where we shall travel on a line of common approach to apoplexy with Bright's disease and to apoplexy without it; but for present convenience, and under the restriction of time, I must rule out the Brightian class. It is by the study in the first instance of the simpler case that we shall get back to the junction.

Now in a case of apoplexy what do we find in the damaged parts? Brain assumably healthy; heart hypertrophied; arteries spoiled: the phenomena lie then in the mechanism of the circulation. Thus, in accordance with our desire, we step back from the static point of view and enter upon the dynamic. We shall try to discover which of the variables in this function are altered? In a simple case the heart presents no primary changes, but changes altogether secondary; essentially it is not only healthy in tissue but has worked for a long time at high pressure, thus doing not less but more than its contract. Such changes as may be seen in it are compensatory, or, if morbid, evidently consequential. Then what about the arteries? These have undergone a change, call it atheroma, sclerosis—what you will, so long as we are agreed on signification—but, diseased as they are, they have not silted up, as in the cases we contemplated but to put aside, but have burst. Why have they burst? Because they have been submitted, not only to the mean pressure of age, but also to the augmenting mean pressures of a reluctant peripheral circulation. They have burst at last for the same reason that they have sustained gradual injury; namely, by the accumulation of obscure stresses, which, if we might observe and measure them, we

might avert and interpret. I put aversion before interpretation because happily in many conditions of life we can take up our guard before we know why we are the object of hostility, or even before we recognize our enemy. We do not know why in cases such as these the circulation is embarrassed: the cause of the reluctance in the periphery lies still beyond our ken. But, briefly, I may say that the cause must consist either in a narrowing of the calibres of the arteries or stream bed over a very extensive area, if not indeed universally, or in an increase of viscosity with excessive friction in the blood itself. I have been asked somewhat tartly how I demonstrate excess of viscosity, and in what it consists? My answer is, that I never said that the blood in these cases is more viscuous, but that there exist the two alternatives only which I have cited—narrowing of the channels and increased friction within the fluid itself. To decide which is the cause, or, if both, the degree of each in the combination, I never pretended. But I admit that it is not easy for me to conceive a contraction of arteries in all or virtually all areas without compensatory dilatation in some of them. It has been suggested to me that in elderly persons the depressor property of the heart and vaso-dilatation may be stiffened or abolished. But a simple test will indicate that our vaso-dilator mechanism is not much abated. Let an elderly man enter a hot bath. For a short time at first he will find the radial artery contracting; let him continue however to observe, and in two or three minutes he will find the artery beginning to dilate, until it is largely distended; and a coresponding afflux of blood takes place to the surface. This is not dilatation of the splanchnic area, it is true; but if vaso-dilator mechanism does not rust up in one area, it probably does not in other areas..

It is alleged that in the elderly the arteries become refractory because of sclerosis, whereby their walls grow sluggish or stiff. This explanation, by the way, is inconsistent with that which attributes excessive arterial pressures to arterial contraction over large areas. And in any case to attribute high pressure to sclerosis, and to overlook the large class of cases in which arterial degeneration is manifested without rise of pressure is bewildering. Again, by some writers increase of arterial pressure is explained as a "hypertonus" of the arteries, a resuscitation surely of that older pathology which used to attribute disease to "hypertrophy of the heart"? It is conceivable, of course, that a morbid state of the vaso-motor centre, due to some persistent irritation in the

spot, might keep up general and persistent vaso-motor contraction. Still this is not very probable, nor do I know that this is the view of those who discuss "hypertonus." Must we not assume for the present that hypertrophy in the arteries is produced by the same mechanism as in the heart, namely, by persistentlv excessive pressures on their internal surfaces? In my opinion the vice lies not in a morbid tone of the vessels, but in excessive internal pressures, such as obstruction at the periphery would set up. If, then, arterial spasm be also a factor in the hyperpiesis, it seems more consistent to atrtibute this to the same cause as that, whatever it may prove to be, which chokes the periphery. My observations are that in some cases of rising pressures without Bright's disease, arterial spasm, whether primary or consequential, is manifestly present; but in others, perhaps the majority, it is not obvious. In some we have what I have called the "large, lax and leathery" artery; in others we find the "wiry" artery. The first kind may be regarded as "arterial tension," for in these cases the effects of tension are very manifest in the consequent tortuosity of the vessels; in the walls of wiry vessels this stretching effect, and indeed the sclerosis itself, is less apparent. Yet in my experience the wiry hyperpiesis is far more difficult to reduce.

However, to come to the matter of prevention; if, concerning the mechanism of persistent rise of mean arterial pressure, we are in the dark; happily, there is less doubt as to the treatment of the condition. If the patient is to be saved from an apoplexy, it is only by long anticipation that the proclivity can be counteracted. It seems probable that a disposition to hyperpiesis runs in families; if so, in such families vigilance is imperative. But the tendency is too common to be regarded as one confined by any such hereditary limits. Even in children and youths it is by no means rare, though I have little information on the deferred consequences of hyperpiesis in such patients. Such information must be obtained from the family physician, who watches children from infancy to youth, from youth to maturity. This I can say, that in young people it may thicken the arteries plainly enough; but the thickening is of the muscular coat only, not of the intima, for it will disappear, as a hypertrophy of the heart disappears in persons who put aside causes of exceptional stress on this organ. The care of these juvenile cases, then, does not fall so near the group of potential apoplectics as to require our attention today. Still, I think a study of these precocious cases may throw

light not only on an undescribed disorder of children, but also upon the causes of hyperpiesis in the elderly.

The aim of this discourse is to prevent apoplexy, which is a message to elderly persons. I have held against all comers for many years that arterio-sclerosis, as distinguished from the sclerotic decay of senile involution, is not the cause, but the consequence of rising arterial pressures. In my view, then, prevention must lie first in the detection of a special tendency to a persistent mean rise. I need not say that occasional rises, even of morbid origin, are apt to occur in all persons, and to disappear before the vessels are permanently damaged. In others, however, the rise is persistent, often to very high degrees; yet if this tendency be detected in its earlier phases it can—in many instances, at any rate—be reduced and kept down; but the longer the story, the older the rearrangement of parts, the harder reduction becomes. I urge, then, that as a matter of routine every adult of the age of forty and upwards should have his blood pressures measured by the best instruments available—instruments which I have not now time to discuss. And I urge that this appreciation should be repeated every five years, say till the age of sixty, when, if there be no great increase—I say no great increase, for in almost all elderly persons there is some rise of mean pressure—the danger of apoplexy may be disregarded.

Of the principles of treatment of hyperpiesis we cannot be completely assured till the obscure points I have mentioned are cleared up. That there is any difference in treatment between the leathery and the wiry artery people I cannot say. So far I have not been able to discover more than that, as I have hinted, in the latter the perversion is far less submissive to deobstruent treatment, as generally understood, than in the former. Nor can I find any therapeutical divergence of practical value between burly, red-faced people and the spare and pallid. I am disposed to think, however, that pallor and wiry vessels are more frequent among the sedentary, and that the burly, red-faced people are of those who may over-eat and over-drink themselves, but take, on the other hand, much exercise in the fresh air. In the former there is a long history of relative excess in feeding; in the latter of positive excess. It cannot be too earnestly declared that nearly all men, and not a few women, take far more food than they need; and that the sedentary persons, such as scholars, lawyers or merchants, although prompted by some nervous exhaustion, they live more generously than cowboys, need very much less food

than they habitually consume. If, then, in any person we find persistent rise of mean pressures, we shall revise his mode of life; advising regulated exercise, abstinence from alcohol—which, if not an initiator, is a potent ally of other influences—and a great reduction in intake of food. In these cases also, the regimen and the waters of certain spas—such as Harrogate, Carlsbad, or Marienbad—are invaluable.

The readiness of response in individuals is very various. In some, as I have said, reduction is attended with much difficulty; in others a couple of seasons at a bath, with punctilious restriction of diet and regular exercise, suffice to put the danger aside, at any rate for a time. In others, do what we may with regimen and medicines, such as mercury and salines incessantly brought to bear, the rise, even if set back, comes up again and again. In such persons the ultimate result of apoplexy is pretty certain. It seems probable that the systematic blood-lettings of our forefathers, who were big feeders, was a rough-and-ready method of preventing morbid augmentations of blood pressures; and I am disposed to think that, practised with more discrimination, we might find in it a valuable remedy in the habit of body I have alluded to. I must honestly confess, however, that I have not had the moral courage to recommend it. Vaso-dilators are, as we should expect, disappointing. The high pressure is conservative, so that to reduce the pressure without removing or relieving the causes which import it is to set natural readjustments at naught. So long as the high pressures can persist the blood is driven through the periphery, and the patient may feel well enough; it is when the cardias energy begins to slacken, and vaso-dilators are apt to slacken the heart also, that he suffers from the sense of exhaustion, the vertigo and the morning melancholy which vaso-dilators bring on factitiously. Notwithstanding, vaso-dilators may on occasion aid us at critical moments.*

I need not say that if a slight apoplexy occur, these measures must be undertaken with the more determination. Too often, unfortunately, we are not consulted until the enemy is upon us; still, even then, on the lines I have indicated, a return of the attack may be postponed with no little success.

In conclusion, let me urge upon you in all cases in which you are consulted by middle-aged persons, to note the blood pressures, and if possible to record them by means of one of the instruments which give us at any rate approximate estimates in this research. Not rarely, in consultation with

physicians whose ability is above my praise, I note high blood pressures which they had not heeded, although they may freely admit the truth of the observation when their attention is drawn to it. Even the most capable of us are apt to see what we expect to see, and that only. Moreover the most erudite finger cannot always be trusted. It is my purpose, therefore, to invite you to take heed to the state of pressure in all middle-aged patients, and, if occasion occur, in persons who, not admitting any ill-health, may nevertheless be breeding an apoplexy unawares; a few years more neglect, and the event, unless anticipated by a fatal pneumonia, may be inevitable.—*Bristol Medico-Chir. Jour.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

Almost Complete Absence of the Inter-Auricular Septum, with Infective Endocarditis.

Total absence of the inter-auricular septum is very rare, hence the following case is of special interest. For three weeks the patient had experienced a general malaise, had frequent spells of coughing, dyspnea and diminution of appetite. The day before entering the hospital he had small but repeated attacks of hemoptysis. When seen by Collet and Beriel he had great dyspnea, but was not cyanotic. Examination of the heart showed considerable hypertrophy; the apex was in the sixth space, where also could be heard a systolic murmur, extending towards the axillary line and the back. Respiration at the base of the lungs was somewhat muffled. The liver extended two finger-widths below the ribs; the urine contained albumen. Two days later there was heard another systolic murmur over the pulmonary orifice; the temperature ranged from 37 deg. to 40 deg. Subsequently there developed general edema, blood-stained sputa and dulness over the bases of the lungs. Only three days before death was there noted a distinct cyanosis. At the autopsy, numerous foci of broncho-pneumonia were found in the lungs. The kidneys, on histological examination, showed evidence of subacute nephritis. The heart was much hypertrophied, specially on the right side; the inter-auricular septum was absent and the auricles communicated through a large opening limited only by a ring of scar-like tissue; there were also evidences of endocarditis and mitral insufficiency. As for the origin of the condition, it could possibly be due to an ulcerative endocarditis of infancy that had not been diagnosed. The greater probability was that it was a congenital malformation. A fact worthy of note was the absence of cyanosis, in spite of the free mingling of venous and arterial blood. The cyanosis observed during the last three days of the patient's life was due to the foci of broncho-pneumonia and to the infarcts, which considerably disturbed the pulmonary circulation.—Translated from *Giornale Internazionale delle Scienze Mediche,* by HARLEY SMITH.

Insufficiency of the Heart in Mitral Affections.

Stein, as the result of clinical and histological investigation of the heart in thirteen cases in which the disease was of rheumatic origin, tries to prove that the symptoms of cardiac asthenia in affections of the mitral valve, do not always depend on myocarditis. Of his patients only four presented evident lesions of chronic myocarditis; in the other cases, there were found only small foci of sclerosis in the myocardium; the connective tissue in these foci was an adult fibrous connective tissue, embryonal cells being found only occassionally. The small size of the lesions found (none was visible to the naked eye), and their varied location, could not have much influence on the function of the heart. Often in patients dying of other diseases there have been found much graver lesions of the myocardium, which had not produced any symptom of asystole.

In order to explain the sudden asthenia of the heart in some mitral cases, with insignificant lesions of the myocardium, one may suppose that some of these small cicatrical foci invade the intrinsic motor centres of the heart with a sudden fatal result. But since the cases of sudden death are relatively infrequent, we must infer that the result is due either to a functional nervous disturbance, produced by the as yet unknown toxines of rheumatism, or to the extension and arrangement of the valvular changes themselves. Stein, having produced mitral insufficiency in some rabbits by wounding the valves, has proved that the insufficiency having reached a certain degree, can be no further compensated by the myocardium, and that the animal succumbs without presenting a trace of myocarditis.—Translated from *Giornale Internazionale delle Scienze Mediche,* by Harley Smith.

Influenza.

In introducing a discussion on this subject at the Hunterian Society (*Brit. Med. Jour.,* May 6th) Clifford Allbutt said the disease was apparently a very old one. Every century since the twelfth has had a virulent outbreak, and in almost every century there has been a distinguished observer to record it for us. The epidemic of 1540 was very fatal. In the seventeenth century we have both Willis and Sydenham as observers; in the eighteenth, Fothergill and Heberden were the historians. Of the pestilence in 1733, Huxham has left a classical account, and in 1803, we have a description by probably the greatest physician who ever lived—Laënnec. In the last century, the epidemic of the forties was less severe than

that in the thirties, but the outbreak in 1889-90 was perhaps the most fatal in its effects.

The disease seems to be endemic in Northern Central Asia, just as cholera is endemic on the Ganges. The outpost from which the last epidemic is definitely traced to us is Bokhara, following from there the three chief trade routes westward. It was in St. Petersburg in November, 1889, and early in December it was in London and Paris. New York was reached eight or nine days later, but nearly two months elapsed before such remote districts as Hudson Bay were afflicted by the unwelcome visitant. The thing most worthy of note in this respect was that the larger towns, where only the express trains stop, were the first to suffer.

At this time, few physicians regarded the disease as contagious, thinking that it swept the folk down like an atmospheric wave. We know now, of course, that the terrible suddenness is accounted for by the very short incubation, apparently sometimes even less than twenty-four hours, nearly always less than forty-eight hours.

Allbutt thinks the disease is propagated by the sputum and spray of the respiratory tract, for he has never known a patient prove infectious who had no involvement of the air passages.

The public susceptibility in the 1890 epidemic was terrific. No one seemed immune. Young children, however, were not so often attacked, and when they did fall victims they suffered little from sequels, except in the ear. The immunity lasts nearly always six months, and more often a year.

The morbid anatomy has most to do with the lungs. The consolidation is never quite of the same appearance as that of the so-called croupous pneumonia; the surface is softer, more uniform and more glistening. If there is a lobar inflammation, it is almost always associated with lobular patches, and is seldom confined to one lung. It is a useful general rule to remember that the sputum of influenzal pneumonia is never rusty. Influenza, too, may cause cavities in the lungs.

Pleuritic effusions in this disease do badly; pericardial, worse; and empyemas seldom recover.

The heart in influenza is a little inexplicable. Although the histological changes amount to very little, yet the heart is in special peril, more, perhaps, than in any other infectious disease.

The characteristic symptoms are the extremely sudden on-

set and the great prostration. The convalescence is usually prolonged, but fortunately, when the malaise does leave, it departs almost as suddenly as it came.

To the three forms commonly distinguished, nervous, respiratory, and gastrointestinal, Allbutt would add a fourth, the continuous, which is not so uncommon. A point worthy of note in diagnosis is that the urine in influenza is not high-colored and is not lateritious.

After an attack, chloroform should never be given as an anesthetic, on account of the cardiac weakness.

A sequel not mentioned in books is the obstinate recurrence of profuse paroxysmal sweats for months after.

In treatment, the writer insists that the patient go to bed the moment he suspects influenza, stay there till he is over the acute phase, and live on a low nitrogen diet, such as milk and custard. F. A. C.

Perforation in Typhoid Fever.

Scott (*Univ. of Penn. Bull.*) has collected from the records of the Pennsylvania Hospital some valuable facts on this subject. One-fourth of all the deaths from typhoid are due to this cause, and probably one-quarter of these could have been saved by surgery. The perforation occurs between the second and fifth week, most often in the ileum. Generally it is small, and pin-point in size, due to gradual erosion of the ulcer.

The three most important symptoms in the diagnosis are pain, tenderness and rigidity, though all may be absent. Loss of liver dulness and shivering are very unreliable signs, neither does the blood-picture give any satisfactory information. The temperature chart shows, first, a sudden rise, and then a slow fall, but, as ordinarily kept in the hospital, this may not appear at all.

Urine After Anesthesia.

Goodurn (*Therap. Gazet.*) found albumin or casts, or both, in 40 per cent. of his patients after chloroform. With nitrous oxide, followed by ether, the percentage was 12, while ether alone gave 39. Sugar was found in about 1½ per cent. of cases, by all methods of administering the anesthetic, ether having a slilght proportion more. In all cases the albumin and casts disappeared in a few days (rarely more than ten), while sugar was absent after the first day.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. McILWRAITH, FRED. FENTON AND HELEN MacMURCHY.

Five notable papers on obstetrical subjects, comprising, indeed, a large part of the initial number, appear in the new *International Medical Magazine*, which appeared in Chicago on July 1st, under the title "Surgery, Gynecology and Obstetrics." The papers above referred to were all read before the American Gynecological Society at its annual meeting at Niagara Falls in May, 1905, and are as follows: "Appendicitis and Pregnancy," by J. Clarence Webster, Chicago; "Sudden Death during or immediately after the Termination of Pregnancy," Edward P. Davis, M.D., Philadelphia; "Pernicious Vomiting of Pregnancy," J. Whitridge Williams, M.D., Baltimore; "Clinical Types of Pregnancy Toxemia," J. Clifton Edgar, M.D., New York; "Appendicitis Complicating Pregnancy," Henry C. Coe, M.D., New York.

Dr. Davis' paper is exceedingly interesting, and in addition he gives a valuable bibliography and a tabulated history of 27 of the recorded cases. His conclusions, derived from his own experience and from a study of 193 papers on the subject, are these:—

1st. Sudden death may occur after abortion, labor or operation, from undemonstrable causes, autopsy finding no adequate reason for the accident.

2nd. Death may follow abortion, labor or operation from the rapid formation of a pulmonary embolus.

3rd. Patient may die suddenly after labor or operation at any period within a month from primary thrombosis and secondary embolism.

4th. Among the rare causes of sudden death in parturient women and operative cases must be mentioned sudden nervous reflex from vaginal manipulation, a patient dying immediately upon vaginal examination from no assignable cause.

Dr. Whitridge Williams speaks of Reflex, Neurotic and Toxemic Vomiting of Pregnancy, and has no hesitation in saying, from his own experience, in at least a certain proportion of the toxemic cases of vomiting of pregnancy, characteristic lesions may be found at autopsy, and are identical with those observed in acute yellow atrophy and icterus gravis.

Dr. J. Clifton Edgar describes, with cases, eight types of Pregnancy Toxemia.

Dr. Coe opens his paper with an expression of surprise that so little attention is bestowed on appendicitis complicating pregnancy, by recent writers on obstetrics. This is right enough—for example, in Jellett's new book, appendicitis is not even mentioned by name once. It does not appear even in the

index, nor anywhere in the text, so far as we can see. But if Dr. Coe will consult our own Canadian text book on obstetrics, (Wright), he cannot fail to be pleased with the way the subject is handled there.

Cæsarean section seems to be gaining ground again. Of 82 recent operations of this kind 20 were performed for eclampsia.

A recent case of furunculosis and abscess of the vulva in private practice in Toronto was apparently benefited by the administration of saccharomyces cerevisiæ in the form of brewers' yeast ℥i ter in die. This remedy is, of course, supposed to act by increasing leucocytosis.

The Induction of Labor.

Dr. Shiell, Assistant Master of Coombe Maternity Hospital, Dublin, in a paper on "The Induction of Labor," (*Brit. Med. Journal*), reports some cases and concludes as follows, respecting the methods adopted: I believe No. 10 bougie is the size most generally used by those who catheterize the uterus. I have tried larger sizes (12 and 14) where the os would admit them, and having once got them through the cirvex found they were more easily introduced and with less danger of rupturing the membranes. The larger sizes, as one would expect, appear also to irritate the uterus to a more marked degree. Whatever size is used, there is no need to injure the placenta in any way; as, if during introduction the placental site be reached, the bougie can be gently withdrawn and reinserted in another direction. Infection will not occur if proper antiseptic precautions be taken, but there is no operation in obstetrics which more severely tests the aseptic technique of the operator. The profession owe to Krause a debt of gratitude for his introuction of the bougie method of induction of labor. His method was not entirely successful in all my cases—even after repeating it a third time. We have, in digital separation of the membranes and tight plugging of the vagina, powerful and useful adjuncts. Injection of fluids into the uterine cavity is a method which seems to me to have but little to recommend it. With the sole object of stimulating uterine contraction I consider the branched dilator superior to the inelastic bag of Champetier de Ribes.

In no instance in which I have used it did the former fail to excite pains, but it has its indications and limits, too. I prefer, and consider it safer, not to use it unless the cervix is taken up largely, if not entirely, gaining this end by the other means which I have spoken of.

With regard to the instruments themselves, Bozzi's, the original, has been entirely superseded by Frommer's invention—the latter with its eight blades against Bozzi's four— and therefore during dilatation the os is more nearly a true circle,

consequently there is less fear of laceration. Seigneux's new instrument is a heavy, clumsy article; it also has but four blades, but they work at a considerable angle with the shaft; this angle at first sight appears to be—as the inventor claims for it—a distinct advantage, whereas in actual use I have found it most disappointing. Also in the particular Seigneux's instrument I have used—if not in others by the same maker—I have found the much greater rigidity of the antero-posterior blades, as compared with the lateral blades, a great drawback to its use, as the os during distension is thereby made diamond shape. Although not the newest invention, Frommer's instrument is, I believe, the best so far produced.

I have suggested and successfully used a little manœuvre with this instrument, by which the operator can estimate and control the amount of tension he is subjecting the cervix to. It is as follows: During dilatation up to say 3 cm. diameter, use the instrument, with the two anterior blades entirely removed, inserting the forefinger with nail towards the instrument into the place lately occupied by the blades removed. This finger will act as efficiently as would the blades if left *in situ*, with the added advantage that the operator can estimate to a nicety the tension of the cervix, and so cause dilatation to proceed quickly or slowly as the occasion demands. As dilatation progresses, the replacement of one of the blades removed will still allow sufficient room for the finger, until finally all the blades may be replaced, there being still room to admit the finger between any of the blades. I know of no other 8-bladed dilator on the market which will admit of one or more blades being removed or replaced without taking the whole instrument asunder.

Working upon past experience, when a case comes under my care which for one reason or another requires induction of labor, and great haste is not essential for the safety of the patient, I shall, if the os be small, dilate up to about No. 16 or 18 Kelly's dilators, inserting then into the uterus three of the largest bougies capable of passing through the os at the same time, and tightly plugging the vagina with sterilized gauze.

If this had not the desired effect in twenty-four hours I would repeat the treatment, and as soon as the cervix was partly taken up, if uterine contractions were not strong, I would use the Frommer to stimulate them, and allow Nature to complete delivery if no complication arose later. Should it happen—and so far I have been fortunate in its not occurring with me—that the membranes were accidentally ruptured during manipulation with the dilator, then, and not till then, would I be tempted use the hydrostatic dilators to assist me in the induction of labor.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN, M.B., M.D.,C.M.

Obligatory Teaching of Otology.

In the December *Annals of Otology, Rhinology and Laryngology* (1904), Professors Gradenigo and Politzer, of Vienna, strongly urge, in separate articles, the necessity for the obligatory teaching of otology in the medical schools.

Coffee Amblyopia.

It is a well-known fact that tobacco will cause varying degrees of amblyopia (loss of vision), but it is not so generally known that the use of coffee will do the same. An excellent article by A. E. Bulson (read at the meeting of the American Academy of Ophthalmology), in the *American Journal of Ophthalmology* on "Coffee Amblyopia," with the discussions in connection therewith, brings out this truth. He says that among the substances which may, through toxic action, produce amblyopic symptoms, unaccompanied by demonstrable retinal or optic nerve lesions, coffee may be included, though ophthalmological literature contains but few and brief references to the subject.

The manner in which the visual disturbance is produced is somewhat in doubt, though the theory advanced by Casey Woods that it is occasioned by a ptomain poisoning, generated as a direct result of the injurious influence of excessive quantities of coffee taken into the system, seems worthy of acceptance.

Two cases are detailed, in the first of which the vision was not half of normal (20.50) and no cause for this defect was ascertainable except that the patient was in the habit of taking large quantities of strong coffee. No lenses were of any benefit.

The patient was directed to totally abstain from the use of coffee, and was given pilocarpine sweats, and daily hypodermic injections of strychnine in increasing doses, beginning with 1.20 grain. At the end of one week the vision had increased to 20.30 plus, and the fields had decidedly widened. At this time the pilocarpine treatment was discontinued, but the strychnine was continued in doses of 1.10 grain in tablet form, after each meal. At the end of four weeks the fields of vision were approximately normal, and vision 20.20 each eye. The digestion and condition of the bowels had also improved. Patient then disappeared from observation and was not again seen until four weeks ago when she returned by request for

report as to condition. There has been no return of the trouble. The use of coffee has not been resumed.

A more definite proof of the fact that coffee may be responsible for visual disturbance was found in the history of the following case, in which a relapse occurred as a direct result of the resumption of the use of coffee: This patient, a lady, aged 41, had noticed impaired vision for several months, but became much worse during the later weeks. Patient reported that for two or three years she had been accustomed to drinking large quantities of strong coffee, which she took at varying intervals during the day from the coffee pot, which was constantly kept filled and on the stove. She said she depended upon coffee to to sustain her.

On examination both eyes were found fairly normal in appearance, with the exception that the pupil reacted a little slowly to light and accommodation. Vision 20.70 each eye, and not improved with lenses. Media clear. Fundus of each eye presented a slight pallor of the temporal half of the disc, and haziness of the edges, but otherwise normal.

The patient was directed to abstain from the use of coffee, and pirocarpine sweats and strychnine were prescribed. Under the treatment the vision steadily improved and the fields of vision widened until on August 13th, when the patient was discharged, the conditions were essentially normal.

The patient was not seen again until July 9th, 1904, when she returned complaining that her vision had within two or three weeks become affected, much as it was at the time of the first consultation over one year before. She reluctantly admitted that for two months she had been drinking coffee again.

The patient was again forbidden to use coffee and placed on the same treatment; but improvement was much slower than on the first occasion.

These two cases led the author of the paper to experiment upon himself, and he succeeded in inducing a mild coffee amblyopia which, however, soon disappeared when he ceased taking the coffee.

The Use of Quinine for Corneal Ulcers.

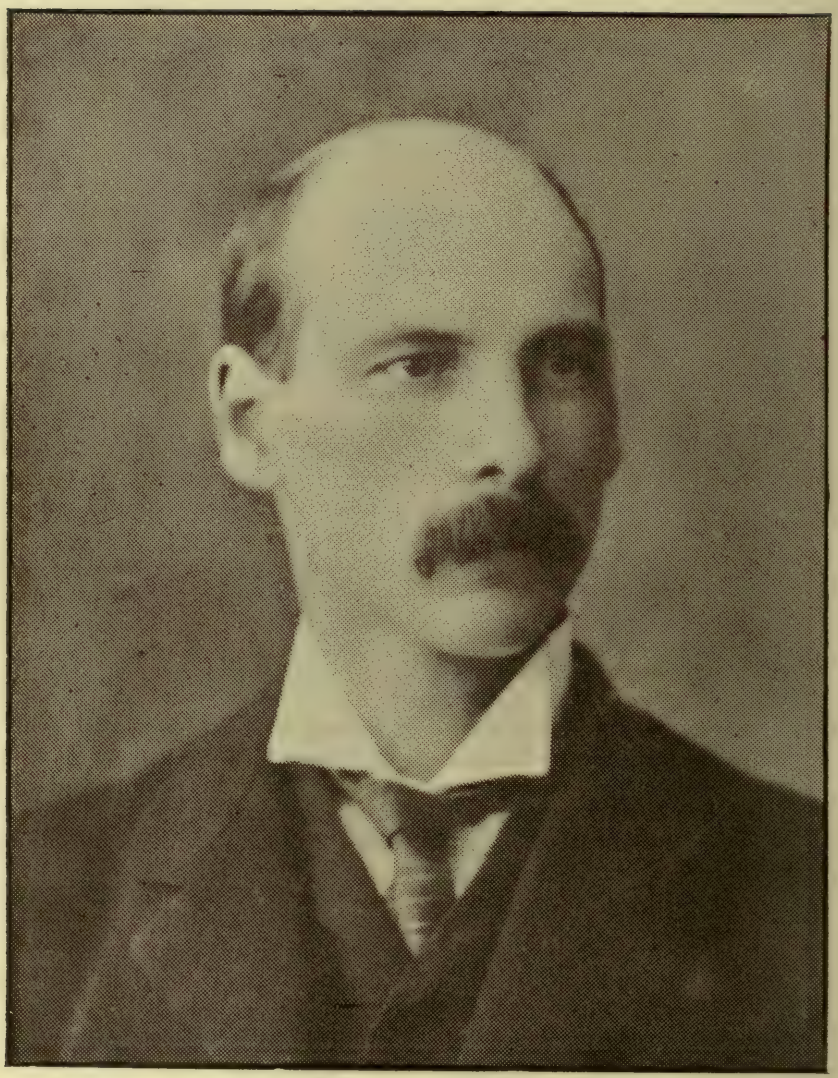
Mr. Arnold Lawson (*Journal of Ophthalmology*) read a paper on the treatment of corneal ulcers by quinine. He said that up to the present time the use of quinine in ophthalmology had been restricted to a very limited class of conjunctival and corneal affections, but his observations, which had extended over four years, showed that it was a very powerful curative agent in a large variety of corneal ulcers not amenable to ordinary routine treatment, to which much more drastic measures were commonly applied. The sulphate of quinine, dissolved

carefully in just sufficient sulphuric acid to hold the salt in solution, was preferable to either the hydrochloride or the acid sulphate, both of which were soluble in water; and it was recommended to be used in a one per cent. solution. The eyes should be soaked in the solution for five minutes four or five times a day, and in addition a thorough irrigation daily by an undine filled with the solution was advised. It caused very little discomfort, and patients used it readily, but stronger solutions gave rise to pain and had no advantage. When the treatment was going to be successful, improvement showed itself within a few days, and if no manifest benefit was obtained within a week it might be discontinued. The rapidity of healing under this treatment was at times remarkable, and the author had seen many formidable-looking ulcers heal by this treatment alone within a week. A list of several cases of corneal ulceration treated by this method within the last three years was appended to the paper.

The Rationale of Moist Cold Applications in Acute Contagious Ophthalmia.

Weeks writes on this subject in the *Journal of the American Medical Association* of December 10th, 1904. He says that in considering this matter it is well to bear in mind the thermal conditions under which the pneumococcus, Koch-Weeks' bacillus, gynococcus, and Klebs-Loeffler bacillus develop. The thermal range of development of the pneumococcus is between about 55° to 110° F.; of the Koch-Weeks' bacillus and the gynococcus 85° to 110° F.; of the Klebs-Loeffler bacillus about the same as the pneumococcus. The object of cold applications is really to inhibit the growth of the specific microörganism. This can be accomplished in the cases of conjunctivitis caused by microörganisms that do not develop below 88° F., as by cold applications the temperature of the conjunctiva may be reduced approximately to 92° F. In cases due to microörganisms that develop below 92° F., cold does little good.

Moist heat applied to the lids cannot be employed to raise the temperature of the conjunctiva above 110° F., seldom above 102° F., consequently it is of no value as an agent to inhibit the growth of the microörganisms concerned. It is only of value to assist in disposing of effete material, plastic or otherwise, which may be present in the tissues by rendering the flow of blood and lymph more free.



DR. J. N. E. BROWN

Superintendent Toronto General Hospital

Editorials.

THE BRITISH MEDICAL ASSOCIATION.

The profession of Canada are pleased to learn that the next meeting of this great medical society will be held in this country. The Council of the Association, in a response to an invitation from Canada, has decided that Toronto will be the place of meeting in 1906.

At the meeting of the Association in Nottingham, 1892, Sir William Highston, of Montreal, said "he trusted that at no very distant date the British Medical Association would visit Canada. They would there find a heterogenous population—French, English, Scotch and Irish—but amongst them, they would find, too, an attachment to Her Most Gracious Majesty Queen Victoria, an intense love of British institutions, and a very deep feeling of loyalty to the Crown; and if the Association would do them the honor suggested he could assure for the profession a most cordial and hearty welcome."

Again, in 1896, Doctors Roddick, Armstrong and Adami of Montreal, and Doctors MacCallum, Cameron, Peters and Doolittle, of Toronto, speaking on behalf of Canada, invited the Society to hold the meeting of 1897 in Montreal. This invitation was cordially accepted, and Dr. Roddick was elected President. We shall have something to say about this magnificent meeting in a future issue.

In the meantime it will be interesting to consider certain matters in connection with the history of the Association, although in so doing we shall be to a large extent repeating our words of former years. The Association is now seventy-three years old. Its growth in earlier years was slow, but it has grown during the last thirty-five years with marvellous rapidity. Dr. White, of Nottingham, stated in his Presidential address, 1892, that he was Secretary of the Association in 1857, when there was an attendance of between eighty and ninety at the annual meeting. In its earlier days it was called the Provincial Medical and Surgical Association. In 1856 the meeting was held in Edinburgh, in 1862 in London,

and in 1867 in Dublin. During the meeting of 1857 in Nottingham all the sessions were held in one small room. During the Dublin meeting it was found necessary to divide it into sections, as the work had increased to such an extent. From year to year since that time the sections have increased in number, and in the amount and importance of their work. Dr. Roddick, in his Presidential address, also referred to interesting facts in connection with the growth of the Association and its branches. In 1837, five years after it was organized, there were three branches, namely, the East Anglican, the Bath and Bristol, and the Lancashire and Cheshire. In 1878, there were thirty, one of which was in Jamaica—the first colonial branch formed. There were in 1897 sixty-five branches, with a total membership of nearly 17,000. Of the branches, twenty-seven are Indian and Colonial. The first Canadian branch was formed in Halifax in 1887. Branches were formed in British Columbia, Manitoba, Toronto and Montreal in 1891, and in Ottawa and Quebec in 1897, making altogether seventeen Canadian branches at that time.

We believe that we are voicing the feeling of the great majority of physicians of Canada in expressing the hope that Dr. R. A. Reeve, Dean of the Medical Faculty of the University of Toronto, will be elected President for the coming year.

NEW SUPERINTENDENT OF THE TORONTO GENERAL HOSPITAL.

The appointment of Dr. John N. E. Brown as Superintendent of the Toronto Hospital, has given general satisfaction to the profession of Toronto.

He was graduated from the University of Toronto in 1893. After practising in Toronto for a few years he went to the Yukon Territory shortly after the great gold discovery there. He became Medical Health Officer of Dawson City, and showed great executive ability while filling that somewhat difficult position. He was also for a time Territorial Secretary of the Yukon. Last winter he returned to this part of Canada and

remained for a short time in Toronto. He then went to Johns Hopkins Hospital and University, Baltimore, where he spent some months in post-graduate work.

While in Dawson he married "Faith Fenton," the well-known newspaper correspondent. Among many memories of "Faith Fenton," the writer will never forget some of her comments respecting the meeting of the British Association for the Advancement of Science, held in Toronto in 1897. For instance she told us: "It's a pretty way they have of saying farewell, gathering together for an hour as they did yesterday afternoon to offer the formal thanks and good-byes, and it was equally a courteous way and an evidence of the fine English breeding of our guests, that the most famous amongst them was careful to be present.

"To the little upper room came Lord Kelvin, Lord Lister, Sir John Evans, Sir William Turner, Sir George Robertson, and all the men of magnificent minds, whose faces have grown so familiar to us during the past week. They were not too weary, nor yet too impatient to say 'Thank you,' and 'Good-bye,' and to say them graciously and simply as a child.

"We looked at each one of them in turn, and our gaze lingered longest and last on the dearest old face of all—a face whose loveableness we shall always remember—that of Lord Lister."

MEDICAL ITEMS.

The recent meeting of the American Medical Association, held at Portland, Oregon, July 11th to 14th, was probably more successful than was expected when it was decided last year to hold the meeting for 1905 in the Far West. Although the attendance was not so large as that of the previous year, it was by no means small, as there were registered 1,714. Our genial friend, Dr. Lewis S. McMurtry, of Louisville, Ky., as President, graced the Chair with his usual courtesy and ability. The presidential address was mainly a review of the origin and progress of the association. The next meeting of the association will be held at Boston, Mass., under the presidency of Dr. Wm. J. Mayo, of Rochester, Minnesota.

The Buffalo *Medical Journal* enters upon the 61st year of its publication with the August issue. We tender our congratulations to the editor, Dr. Wm. Warren Potter.

The American Association of Obstetrics and Gynecology will hold its eighteenth annual meeting at the Hotel Astor, New York City, September 19th, 20th, and 21st. The chairman of the Local Committee of Arrangements, Dr. Robert T. Morris, 616 Madison Avenue, will gladly furnish information to members and guests upon application. Dr. Howard Longyear, of Detroit, Mich., is President, and Dr. Wm. Warren Potter, of Buffalo, N.Y., is Secretary.

Graduating Class, 1905, Manitoba Medical College.

William Wilson Amos, Robert Naismyth Burns, B.A., Frederick Todd Cadham, B.A., William Andrew Clark, Thos. Andrew Cohoe, George Hector Craig, B.A., Robert Edward Davis, James Duxbury, Albert Ernest Finlev, William Jesse Grant, Benjamin Arthur Hopkins, Marsden Frank Ross Irwin, Robert Duncan Kippen, Arnot Leishman, David Park Miller, B.A., Harry Morton Murdoff, Harold Wigmore McGill, Chas. James McKinnon, William John Mactavish, William C. Nickle, Richard R. Proctor, George Walter Rogers, Albert Henry Rondeau, Herbert Samuel Sharpe, Harry Blackett Stacpoole, David Chester Thompson, Wilfrid Tucker, John Alexander Valens, Frederick Chas. Walton, George Albert Woodruff, Joseph Theodore Wright.

A school for the study of anatomy is to be established by the faculty of the Post-Graduate Medical School in New York City. We are pleased to announce to his many friends in Canada that Dr. Neil Macphatter will have charge of the department. He received his education in Trinity Medical College, Toronto, and after graduating, proceeded to Edinburgh, where he studied for a number of years, and while there he studied anatomy under the instruction of Sir William Turner. He also spent some time in post-graduate work at Glasgow, London and Birmingham, where he acted as an assistant for some time to Mr. Lawson Tait. He then came to America and settled in Denver, Colorado, practising there until 1898, when he returned to Edinburgh, and became F.R.C.S. Returning to America soon after this he settled in New York City, where he has for years been closely associated with the Post-Graduate Medical School.

TORONTO GENERAL HOSPITAL.

The following rules governing the admission of patients have been adopted by the Board of Trustees:

1. No professional fee, directly or indirectly, shall be charged by any member of the staff for patients who pay $3.50 per week, whether the payment is made on their behalf by the city, by some friend or society, or by themselves. All patients of every sort paying $3.50 per week shall be attended absolutely without professional fee, directly or indirectly.

2. It is desired that there shall be co-operation between the hospital authorities and the attending physicians and surgeons for the purpose of eliminating as far as possible from the $3.50 per week class those who are able to pay for a semi-private ward.

3. All patients admitted on city orders shall be placed in rotation under the seniors in medicine, surgery and other departments, and under the assistants during their term of service.

4. Patients for whom $3.50 per week is paid, either by themselves or by their friends, shall also be placed in rotation under the members of the staff as in the foregoing. If, however, a member of the staff sends to the hospital patients who are under his care in his private practice, with the request that they be allotted to him, or if patients are sent by a physician or surgeon who is not a member of the staff, requesting that they be placed under the care of some certain member of the staff, the admitting officer shall follow such instructions, with the limitations provided in the following paragraphs.

5. All purely gynecological cases paying $3.50 per week, whether city order or cases paid for by the patients or their friends, shall be placed under the charge of the gynecologists or their assistants. Surgeons and assistant surgeons on the staff may attend their special cases, paying $3.50 per week, except gynecological, in the pavilion, provided the wards of the pavilion are not required for gynecological cases.

6. Members of the medical staff may treat their special patients paying $3.50 per week, only when they are medical cases. Surgical members of the staff may treat their special patients paying $3.50 per week only when they are surgical cases.

Members of the pathological staff may treat their special patients paying $3.50 per week only when they are medical cases. Obstetricians and gynecologists shall not treat their

special patients paying $3.50 per week in either the medical or surgical wards of the hospital.

A physician of the Out-patient Department, after five years' service, may have one special case paying $3.50 per week in a medical ward, when such case is sent into the hospital by himself, provided that under no circumstances such patient comes through the Out-patient Department. A surgeon of the Out-patient Department, after five years' service, may have one special case paying $3.50 per week in a surgical ward, when such case is sent into the hospital by himself, provided that under no circumstances such patient comes through the Out-patient Department.

7. Cases treated in the Emergency Hospital by the assistant surgeons or physicians shall be treated by them when removed to the General Hospital.

8. Surgeons who are not members of the staff, who desire to perform operations in the theatre, may do so on private and semi-private patients only, with the approval of a member of the surgical staff, provided that such member be present at the operation.

9. All autopsies shall be performed by the pathologists.

TEXT-BOOK OF OBSTETRICS.

The *Montreal Medical Journal,* August, speaks as follows respecting Dr. Adam Wright's Text-Book of Obstetrics:

"This book is full of the author's personality, and calls to mind the style of Denman's Obstetrics, first published in 1815, and for many years a most popular work both in England and America.

"Dr. Wright has produced an interesting book upon the *art* of obstetrics as distinguished from its science, though in the few places where reference is made to science no particular fault is to be found. On the whole, in this scientific age, such a work comes as a surprise, though perhaps it loses none of its charm by this deficit to many readers.

"The reviewer has perused its pages with interest and not without profit, for it impresses one with the sincerity and earnestness of its author, who is evidently well read and thoughtful, and a good type of the careful, competent practitioner.

"The work opens with a quotation from Longfellow's Hyperion, dealing with the fatuity of speculative know-

ledge, which, taken along with the following sentence on page 428, fully expresses the author's central idea in producing this work: 'It appears to me that there is at the present time considerable danger that we are cultivating science at the expense of art in our profession.'

"Hence, one is not surprised to find scant reference to the etiology of many conditions of the highest interest to the scientific obstetrician. For example, the part dealing with embryology is weak, and the author's remarks in reference to the embedding of the ovum and development of the placenta is antiquated and incorrect.

"Having pointed out these few defects, it is a pleasure to dwell on the many good qualities of this latest contribution to the literature of obstetrics.

"Of special interest on account of clearness, accuracy and often original presentation are the chapters on mechanism, the third stake of labor, the treatment of vomiting of pregnancy, the relation of appendicitis to pregnancy, and also, the most valuable of all, the chapter on tuberculosis.

"In many instances the author illustrates his point by reference to cases he has encountered, and gives careful and interesting reports when so doing.

"The author has very strong viws on the subject of milk diet, whether in typhoid or in the toxemia of pregnancy. He hesitates about denouncing it completely, but concedes its value in the case of young infants and calves, though he does state frankly that in his opinion it is unsuitable for adult human beings.

"The general arrangement of the work is about as usual, being divided into parts, physiological and pathological. The style, as has been said, is good, and the book will be found extremely interesting reading by the physician, and will no doubt be a very popular work among students.

"The illustrations have been well done, and not, as in many recent books, overdone. The publisher's work leaves little to be desired, and is quite up to the usual good style of the Appleton publication."

The Northern Alberta Medical Association, which holds monthly meetings at Edmonton, recently elected the following officers: Honorary President, Dr. McInnes, Edmonton; President, Dr. Harrison, Edmonton; Vice-President, Dr. McIntyre, Strathcona; Sec.-Treasurer, Dr. Whitelaw, Edmonton; Committee, Drs. Wilson, Smith and Clendenan, Edmonton.

Personals.

Dr. D. Evans, Tor. '03, is practising at Lisle, Ont.

Dr. Palmer spent the month of July on the Georgian Bay.

Dr. Arthur B. Wright returned to Toronto August 1st.

Dr. B. Edmondson, Tor. '03, is practising at Castleton, Ont.

Dr. Bruce Riordan, of Toronto, has removed to 73 Simcoe Street.

Dr. Hutchison, Tor. '90, has removed from Ingersoll to Port Rowan.

Dr. R. J. Dwyer, of Toronto, went to the Temiskaming District July 15th.

Dr. F. S. Routhwaite has settled in Cookstown in the place of Dr. MacKay.

Dr. W. B. Thistle, of Toronto, spent the latter half of July at Bic, Quebec.

Dr. J. L. Anderson, formerly of Cannington, has removed to Waterford, Ont.

Dr. I. A. Tripp, Tor. '95, has removed from Simcoe, Ont., to Nottingham, Ohio.

Dr. Dougald MacBane, Tor. '02, has removed from St. Thomas to Winnipeg.

Mrs. Mackinnon, wife of Dr. Angus Mackinnon, of Guelph, Ont., died July 29th.

Dr. W. P. Caven, of Toronto, spent the month of August on his farm at St. Mary's.

Dr. T. W. Duncombe, Tor. '82, formerly of St. Thomas, is now practising at Waterford.

Dr. J. R. O'Brien, of Ottawa, has gone abroad for post-graduate work in London and Paris.

Dr. A. H. Adams, Tor. '04, is resident physician in the Free Hospital for Consumptives at Weston.

Dr. Wm. J. Clark, Tor. '98, of Toronto, has removed from 475 Dovercourt Road to 867 College Street.

Dr. Brefney O'Reilly, who is now in England, expected to sail from London for South Africa about August 20th.

Hon. Dr. R. A. Pyne, who went to England about the middle of July, is expected home early in September.

Dr. Price-Brown left early in August for a trip to Grosse Isle, and expects to return to Toronto September 1st.

Drs. Black, Strathy and Spohn have been appointed House Surgeons to the Hospital for Sick Children, Toronto.

Dr. Uzziel Ogden, of Toronto, who had a slight stroke of paralysis in the latter part of June, is slowly recovering.

Dr. L. E. Rice, Tor. '90, who practised for some years in Dundee, is now engaged in post-graduate work in Europe.

Dr. J. J. Matheson returned to Toronto after having spent a year in Edinburgh and Dublin engaged in post-graduate work.

Mr. John Ross Robertson has given $75,000 for a Nurses' Home in connection with the Hospital for Sick Children, Toronto.

Dr. Murray McFarlane left Toronto July 15th, for a six weeks' trip through California and Oregon, returning home by way of Banff.

Drs. John I. Davison, George McDonagh, George Bingham, Milton Cotton, Geoffrey Boyd and Joseph Graham are holidaying on the Georgian Bay.

Dr. Charles O'Reilly, of Toronto, when last heard from, was at London, having returned from the meeting of the British Medical Association at Leicester.

Dr. H. P. H. Galloway, who has been associated with Dr. B. E. Mackenzie in orthopedic surgery for some years, left for Winnipeg, Man., July 29th.

We are pleased to be able to report that Dr. A. H. Perfect, of Toronto Junction, who was very seriously ill for some time, is now recovered and has resumed practice.

Dr. Alex. MacKay, Tor. '95, after practising in Cookstown for some years, went to New York for post-graduate work, and is now going to the North-West, where he expects to practise.

Dr. E. K. Cullen, Tor. '03, recently a surgeon on the interne staff of the Toronto General Hospital, has been appointed Fellow in Pathology at the Johns Hopkins University, Baltimore.

Dr. Harold C. Parsons (B.A. '91; M.D. '92, Trin.), qualified for membership of the Royal College of Physicians, of London, July, 1905, by examination. He became a licentiate in 1897.

The following have been appointed on the intern staff of the Toronto General Hospital: Doctors J. F. Brodie, Alfred McNally, W. A. Burr, T. A. Davies, A. Kinghorn, E. C. Burson and A. G. McPhedran.

Dr. George A. Peters paid a flying visit to his home in Toronto, August 9th, with health much improved. He looks better and younger than he did five years ago. He will soon return to work, and we rejoice to say that we think he will be quite *fit* for it.

The doctors of the Medical Class of 1890 of Toronto University, who attended their reunion in Toronto, June 10th, were: Doctors L. F. Barker, T. S. Cullen, E. Herbert Adams, A. W. Maybury, R. T. Schiell, C. L. Starr, W. E. Bryans and W. F. Bond. The next reunion will be held at Baltimore.

The following have been appointed coroners: Dr. W. A. Wardell, of Hamilton, for the County of Wentworth; Dr. W. A. Chapman, of Rat Portage, for the Rainy River District; Dr. W. H. Woods, of Caradoc, for the County of Middlesex; Dr. A. R. Farrell, of Tweed, for the County of Hastings; Dr. George P. Sylvester, of Toronto, for Toronto; Dr. John Noble, of Toronto, for Toronto; Dr. Wm. J. Anderson, of Jasper, for Leeds and Grenville; Dr. William Wallace Birdsall, Fort William, for Thunder Bay.

Marriages.

Dr. Alex. D. Stewart, of Fort William, to Miss Pettit, June 22nd.

Dr. Frank C. Neal, of Peterborough, to Miss Reycraft, June 28th.

Dr. J. H. Elliott, of Gravenhurst, to Miss Mabel Tait, June 14th.

Dr. R. R. Wallace, of Hamilton, to Miss Jean Lesslie, June 1st.

Dr. J. M. Jory, of Bloomfield, to Miss Alice Docker, June 7th.

Dr. D. W. McPherson, of Toronto, to Miss Margaret Sloane, June 28th.

Dr. W. Ford McLoghlin, of Hamilton, to Miss Downey, July 14th.

Dr. E. C. Ashtown, of Brantford, to Miss Helen M. Weir, June 14th.

Dr. Jno. F. Armstrong, of Oil Springs, to Miss Murdoch, June 15th.

Obituary.

PROFESSOR HERMANN NOTHNAGEL.

Professor Nothnagel, who succeeded Bamberger as Professor of Medicine, Vienna University, died at his home in Vienna, July 7th, 1905, aged 63, of arterio sclerosis. He was probably one of the greatest teachers of clinical medicine, but was better known in America as a distinguished author. His latest great work, "Nothnagel's Encyclopedia of Practical Medicine," published in America by Messrs. Saunders & Company, is now going through the press.

PROFESSOR MIKULICZ.

Professor Mikulicz, of Breslau, died June 14th, 1905, aged 55, of carcinoma of the stomach. We learn from the pen of Professor J. Schwalde, as quoted in the St. Louis *Medical Review*, that the circumstances surrounding his illness and death were sadly tragic. Indefinite gastric symptoms appeared last summer, and three weeks before Christmas Mikulicz suddenly discovered a tumor, which he himself diagnosed as a non-operable cancer of the stomach. Partly because he considered his case hopeless, and partly because he did not want to put a damper on the Christmas festivities, he said nothing of his condition to anyone. Professor V. Eiselsberg, of Vienna, made an exploratory incision January 7th, and confirmed the diagnosis. After recovering from this operation he entered actively into work again, and gave his usual course for army surgeons. About the middle of April an alarming gastric hemorrhage occurred, followed by rapid decline. During his last few weeks he suffered greatly. The St. Louis *Medical Review* comments as follows: "No one knew better than Mikulicz, a master in gastric surgery, the dread march of the disease that had attacked him. He himself established the diagnosis and then submitted to the only hope of cure. The hope was an illusionary one. He then disposed himself to meet his fate in a manner best calculated to spare his friends and dear ones unnecessary grief and pain." Mikulicz, next to Kocher, was probably the best known surgeon in Europe.

A. PALMER DUDLEY, M.D.

Dr. Palmer Dudley, a distinguished gynecologist of New York, died at Liverpool, England, July 15th, 1905, of pulmonary tuberculosis, aged 52. We are told by the Buffalo *Medical Journal* that Dr. Dudley attended the meeting of the Gynecological Society at Niagara Falls in May last looking the picture of health. He was on his way to St. Petersburg to attend the International Congress of Gynecology and Obstetrics as a delegate from the former society.

W. W. MEACHAM, M.D.

Dr. Meacham, of Warsaw, died at his residence, after a short illness, from apendicitis, aged sixty-four. He lived and practised for many years in Napanee, and represented his county for several years in the Ontario Legislature. In politics he was a Conservatice, and in medical politics was inclined to support the "Defence Association."

FRED JAMES GANT, F.R.C.S.

Mr. Gant, well-known in former years as a great author and teacher of surgery, died in London, June 6th, aged 80. He went to the Crimea in 1854 as civil surgeon of the British military hospitals of the Crimea and Scutari. He was for more than fifty years connected with the Free Hospital in London.

S. R. VON BASCH, M.D.

Professor Von Basch, the well-known Professor of Explanatory Pathology in the University of Vienna, died April 5th, aged 68. He was at one time well-known on this continent as a physician to the unfortunate Kaiser Maximillian, who was shot in Mexico in 1867. In the latter part of the same year he returned to Europe with the body of the dead Emperor. He is said by those who knew him to have been a most able, energetic and lovable man.

Book Reviews.

The American Year-Book of Medicine and Surgery for 1905. A Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of GEORGE M. GOULD, A.M., M.D. In two volumes. Volume I, including *General Medicine*; Volume II, *General Surgery*. Two octavos of about 700 pages each, fully illustrated. Philadelphia and London: W. B. Saunders & Co., 1905. Per volume: Cloth, $3.00 net; Half Morocco, $3.75 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

The 1905 issue of Saunders' American Year-Book of Medicine and Surgery fully maintains the pre-eminent position which it long ago established. Dr. Gould, the editor, has associated with him a staff of men of the greatest ability, shown in the conscientious thoroughness with which each article is prepared. Here the practitioner has placed before him, and at a very moderate price, the cream of all the medical literature published during the past year, and in such a form that it is readily digestible. As a compendium of medical and surgical progress, it will prove invaluable; for the practitioner anxious to keep abreast of the advances in the subjects treated, it will be of the utmost assistance. The text, as usual, contains a number of illustrations of practical value; there are also nine insert plates of much excellence.

Atlas and Text-Book of Topographic and Applied Anatomy. By PROF. DR. O. SCHULTZE, of Wurzburg. Edited, with additions, by GEORGE D. STEWART, M.D., Professor of Anatomy and Clinical Surgery, University and Bellevue Hospital Medical College, New York. Large quarto volume of 187 pages, containing 25 figures on 22 colored lithographic plates, and 89 text cuts, 60 in colors. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.50 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

In the preparation of this book Professor Schultze had in mind the need of a work that would combine the features of a text-book with the educational advantages of an atlas. He has produced a work of great merit, and not alone the anatomist but more particularly the general practitioner will find it of constant value. Professor Schultze has presented his own methods for the study of anatomy—methods proved to be correct and practical by many years of clinical study. Throughout the work the value of the knowledge of topographic anatomy in bedside diagnosis is emphasized. The many colored lithographic plates and the numerous text-cuts, sixty of which are in colors, are of exceptional excellence. Indeed, both for

accurateness of detail and artistic beauty we have never seen their equal. The greater portion of the dissections from which these illustrations have been made are from the author's own preparations. Dr. George D. Stewart in editing the work has added many valuable notes.

Essentials of the Practice of Medicine. Prepared especially for students of medicine. By William R. Williams, M.D., formerly Instructor in Medicine and Lecturer in Hygiene, Cornell University; Tutor in Therapeutics, Columbia University (College of Physicians and Surgeons), New York. 12mo of 461 pages. Philadelphia and London: W. B. Saunders & Company, 1905. Double number. Cloth, $1.75 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

In this new volume in Saunders' Question Compend Series the student is provided with a book of the utmost practical value. Throughout the work special stress has been laid on the more common aspects of the various diseases, emphasizing the contrasting points in similar conditions, so as to render differential diagnosis as easy as possible. Symptomatology and treatment have likewise been adequately, although concisely, considered. In fact, this little work is the best we have seen, and for students preparing for examination it will be a most welcome and trusty aid. It contains a vast amount of practical, essential information in the least possible space.

Malaria, Influenza and Dengue. By Dr. J. Mannaberg, of Vienna, and Dr. O. Leichtenstern, of Cologne. Entire volume edited, with additions, by Ronald Ross, F.R.C.S., F.R.S., Professor of Tropical Medicine, University of Liverpool; J. W. W. Stephens, M.D., D.P.H., Waltor Myers Lecturer in Tropical Medicine, University of Liverpool; and Albert S. Grunbaum, F.R.C.P., Professor of Experimental Medicine, University of Liverpool. Octavo volume of 769 pages, fully illustrated, including eight full-page plates. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.00 net; Half Morocco, $6.00 net. Canadian Agents: J. A. Carveth, & Co., Limited, 434 Yonge Street, Toronto.

This new volume in Saunders' American Edition of Nothnagel's Practise represents the latest word on the sugjects of which it treats. And more than that, it is the undisputed authority on these subjects. For this American edition Dr. Ross has made many additions to the article on Malaria, so many discoveries having been made since the appearance of the original article. The articles on the Mosquito and its various relations to Malaria come from the authoritative pen of Dr. J. W. W. Stephens, of Liverpool. The Influenza and Dengue sections are equally well written. The untiring labor of the editors in preparing this work for the English-speaking market is evidenced on almost every page by the lengthy and valuable editorial interpolations. This is the tenth volume in

the series, and the eleventh one (that dealing with Diseases of the Kidneys and Spleen and with Hemorrhagic Diseases) is promised very soon. When the series is completed it will undoubtedly form the best practise of medicine in existence.

A Reference Handbook for Nurses. By AMANDA K. BECK, of Chicago. 32mo volume of 150 pages. Philadelphia and London: W. B. SAUNDERS & COMPANY, 1905. Bound in flexible morocco, $1.25 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

This little book contains information upon every question that comes to a nurse in her daily work, and embraces all the information that she requires to carry out any directions given by the physician; it includes also instructions for all emergencies that may arise before or between visits of the physician. It is of immense value to student nurses, because it contains all the material they are expected to commit to memory from notes. Physicians, too, will find the book of value, because it contains exact details as to solutions, foods, dosage, poultices, applications, etc. The mechanical get-up of the book is both convenient and attractive. It is of a size to fit the pocket and is neatly bound in flexible morocco.

The Pharmacopeia of the United States of America. Eighth Decennial Revision. By authority o the United States Pharmacopeial Convention, held at Washington, A.D., 1900. Revised by the Committee of Revision and published by the Board of Trustees. Official from September 1st, 1905. Philadelphia Agents: P. Blakiston's Son and Company; Sub-agents, New York: E. R. Pelton, 10 East Sixteenth Street; Chicago: The E. H. Colgrove Company, 65 Randolph Street; St. Louis: C. V. Mosby, 2313 Washington Avenue; San Francisco: Payot, Upham & Co., 100 Battery Street. Price, $2.50, in cloth.

The eighth revision of this weighty work has been distributed to the journals for review. It will not, however, become official until September 1st. We notice it gives average doses in place of maximum and minimum doses, and these are indicated in metrical terms with their equivalents in apothecaries' measure.

Attention is especially called to the changes of strength in the tinctures of aconite, veratum and strophanthus. The aconite has been introduced from 35 per cent. to 10 per cent., the veratum from 40 per cent. to 10 per cent., while the strophanthus has been increased from 5 per cent. to 10 per cent. These changes have been made to the standards adopted at the International Congress, the object being to make uniform the strength of patent remedies in all parts of the world.

The historical introduction which is given is one of unusual interest, commencing with the year of 1817, when the

project was introduced of launching the International American Pharmacopeia. The first pharmacopeia published was a small one for the use of the Military Hospital of the United States Army; the second one appeared in 1781, on the title page of which Dr. Wm. Brown is mentioned as author; the fifth revision was published in 1873; the sixth in 1882, and the seventh in 1893. This, the eighth edition, was published under the United States International Pharmacopeial Convention, held at Washington in 1890, revised and made official from September 1st, 1905.

We are indebted to the J. B. Lippincott Company for this official copy, No. "A," 2837.

It would be well for all practitioners in Canada to possess themselves of a copy, as it will be found equally as useful to them as the British Pharmacopeia, the last edition of which was issued in 1898.

Progressive Medicine. Vol. II, June, 1905. A Quarterly Digest of Advances, Discoveries and improvements in Medical and Surgical Sciences. Edited by HOBART AHORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 346 pages, 48 illustrations. Per annum, in four cloth bound volumes, $9.00; in paper binding, $6.00; carriage paid to any address. Lea Brothers & Co., Publishers, Philadelphia and New York.

This volume contains articles on hernia, by Coley; surgery of abdomen, by Foote; gynecology, by J. G. Clark; diseases of blood and spleen, by Stengel, and ophthalmology, by Jackson. It is in every way equal to those which have preceded it.

A Text-Book on the Practise of Gynecology. For Practitioners and Students. By W. EASTERLY ASHTON, M.D., LL.D., Fellow of the American Gynecologic Society; Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Octavo volume of 1079 pages, containing 1046 new and entirely original line drawings. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $6.50 net; half morocco, $7.50 net, Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street. Toronto.

Dr. Ashton's Practice of Gynecology is a new departure in medical text-book making. The author takes up each procedure step by step, the student being led from one step to another just as in studying any non-medical subject. Dr. Ashton in every instance tells what should be done, and how to do it. All the methods and details of technique described have been thoroughly tested by the author himself, so as to assure their value and accuracy. A very commendable feature is the departure from the old routine method of devoting a general chapter to physical examination. In place of this the author presents the examination of each organ separately before de-

scribing its disease, thus greatly aiding the student in familiarizing himself with the technique. A distinctly original feature consists in the line drawings made especially for this work under the author's personal supervision from actual apparatus, living models, dissections on the cadaver, and from the operative technics of other authors. There are ten hundred and forty-six of these illustrations, showing the procedures and operations without obscuring their purpose by unnecessary anatomical surroundings. Definite and precise instructions are given regarding the preservation of specimens of morbid tissues and secretions, and their delivery in good condition to the pathologist. The fore part of the work, dealing with antiseptic technique, shows great care in its preparataion, Dr. Ashton wisely describing only those methods which he employs in his own practice. Very special attention has been given to the consideration of visceral injuries, and we know of no other work on gynecology or general surgery discussing this important subject with the same amount of detail. This is decidedly a work for the general practitioner as well as for the student; and a good one.

Modern Clinical Medicine: Infectious Diseases. Edited by J. C. WILSON, A.M., M.D., Professor of Medicine in the Jefferson Medical College; Physician-in-chief to the German Hospital, Philadelphia; Physician to the Jefferson and Pennsylvania Hospitals, etc. An authorized translation from the *Die Deutsche Klinik* under the general editorial supervision of JULIUS L. SALINGER, M.D. With two colored plates and sixty illustrations in the text. New York and London: D. Appleton & Company.

The nineteenth century has been famous for the advance made in clinical medicine, and it is to the able professors of the great schools of medicine in Vienna and Berlin that we owe this advance. They gained a supremacy which they worthily maintain at the present time, and were the ones who first used and developed the term of "Internal Medicine."

This present volume is made up largely of material from the *Die Deutsche Klinik* which has been written by the foremost clinicians of Austria and Germany, men who are well-known authorities on the subjects on which they write. Among the contributions are to be found well-known specialists, such as, Klemperr, of Berlin; Liebermeister, of Tubingen; Brion, of Strassburg; Lichtheim, of Konigsberg; Ortner, of Vienna; Huebner, of Berlin; Baumler, of Freiburg; Echorst, of Berlin; others may also be mentioned—Ewald, Leube, Baginsky, Nothnagel, Curschmann, Ehrlich, Lœffer, Sanator and others.

The translation of this work is marvellously well done and those who are fortunate in possessing a copy will find not only the literary embodiment of the most advanced science, but it is

adapted in a surprising degree to the every-day needs of the practitioner, the teacher and the student. Great and unlooked for advances have been made in connection with research concerning infectious diseases, and this volume brings it all up to the standard of present knowledge.

"Infectious Diseases" is a volume of 925 pages, including the index, which is unusually complete. The work contains many illustrations in black and white and two colored plates. The entire field of infectious diseases is covered fully and practically. There is nothing in this work that is unnecessary, but everything which is essential. There are chapters on Typhoid and Typhus Fevers, Diphtheria, Measles, Scarlet Fever, Small-pox, Cholera, Erysipelas, etc.

The price in cloth of "Infectious Diseases" is $6.00. The volume in "Modern Clinical Medicine" will be sold separately. The second volume in this series, which is now in preparation, is "Constitutional Diseases and Diseases of the Blood"; the third volume in the series will be "Diseases of the Digestive Tract."

Atlas and Epitome of Operative Gynecology. By Dr. O. Schaeffer, of Heidelberg. Edited, with additions, by J. Clarence Webster, M.D (Edin.), F.R.C.P.E., Professor of Obstetrics and Gynecology in Rush Medical College, in affiliation with the University of Chicago. With 42 lithographic plates in colors, many text cuts, a number in colors, and 138 pages of text. Cloth, $3.00 net. Philadelphia, New York, London: W. B. Saunders & Company, 1904.

This new addition to Saunders' admirable series of Hand-Atlases is excellent. It is unfortunate that medical students each year know less about gynecologic operations than about almost any other department of operative surgery. This atlas, therefore, is opportune, and the excellence of the lithographic plates and the many other illustrations render it of the greatest value in obtaining a sound and practical knowledge of operative gynecology. Indeed, the artist, the author, and the lithographer have evidently expended much patient endeavor in the preparation of the water-colors and drawings. They are based on hundreds of photographs taken from nature and reproduce faithfully and instructively the various situations which they intend to illustrate. The text closely follows the illustrations, and we have found it fully as accurate. We consider it of great value to the up-to-date practitioner and surgeon, as well as to the specialist.

Selections.

Inoperable Carcinoma and Roentgen Rays.

Freund exhibited a patient to the "Gesellschaft," who came to him about the beginning of December with a carcinomatous tumor of the breast, too far advanced for operative purposes, on which he applied the Roentgen Rays with wonderful success. When she saw him first the tumor was larger than a man's fist, of stony hardness, and firmly attached to the bony walls of the thorax. The surface of the tumor was ulcerated over the area of a five-shilling piece, while the axillary and subclavian glands were greatly enlarged.

On January 9th, after eight applications of the rays, there was intense reddening, associated with severe pain over the site of radial application. The swelling by this time had fallen to the size of an apple, with discharges of caseous matter, fever, and lowered appetite, while the neuralgic pains deprived the patient of a comfortable night's sleep. These pains were confined to the arm and mediastinum.

The rays were again applied between February 6th and 11th and March 6th and 10th. After February 18th the discharge began to change to a watery consistence with separating lamina; the swelling quite disappeared, and the edges of the wound subsequently became red and granular till it ultimately healed.

To-day a large cicatrix marks the site of the morbid growth. In the centre of this are a few excoriations about the size of pin-heads, but all the rest, which is about the size of the palm of the hand, is covered with healthy skin. The glands in the arm-pit and subclavium are decidedly less, while the patient is immensely improved. The pain is now more like a drawing of the cicatrix, but recently a bronchial catarrh has set in, which is probably due to pulmonary metastasis; otherwise the patient expresses herself as perfectly well again. and can enjoy herself.—*Vienna Correspondent Medical Press and Circular.*

The Active Principle of Exodin.

Purely an empirical mixture of the diacetyl-rufigallic acid-tetramethyl-ether, acetyl-rufigallic acid-pentamethyl-ether and rufigallic acid-hexamethyl-ether, exodin, has a well-marked purgative or laxative action, and W. Ebstein has experimented with the ingredients to discover on what this action rests. (*Deut. Med. Woch.*, January 22nd, 1905.) It has been asserted that the last named ingredient possesses the laxative

action of exodin. Ebstein obtained some chemically pure samples of all three, and systematically tested each on a number of persons, including himself. He found that even when given in doses of 1 gram rufigallic acid-hexamethyl-ether has no action at all. The action was compared with that of exodin in the same persons, and it was therefore proved that this substance is not the active principle. Next he tried the diacetyl compound, containing the four groups of methyl-ether; 1 gram again was given, and in one case it acted freely, in another it acted weakly, and in two not at all. In one case, after 1 gram had failed, 2 produced a copious motion. While there can be no doubt that this substance possesses a purgative action, it is clear that the action of exodin is far stronger, the dose of the pure chemical being much larger than the dose necessary to produce the same effect of exodin. Lastily he tried the pentamythl-ether compund. This substance has a purgative action, but it also has the property of causing griping in persons suffering from constipation, which exodin does not possess. It therefore appears that exodin owes its peculiar action on the lucky mixture of diactyl-rufigallic acid-tetramethyl ether and acetyl-rufigallic acid-penetamethyl-ether. The author praises the mild action of exodin, and says that he has been able to prove by experience that when exodin in repeated in doses of 1 to 1½ gram does not act, the best treatment is by means of large oil enemata.—*The British Medical Journal.*

A New Method of Accurately Examining the Hymen in Medico-Legal Cases.—By Dr. J. L. Loudon.

In the case of vigins in whom rape is suspected, the author advises recourse to the following procedure in order to determine the exact nature and degree of multilation of the hymen.

The patient being in the lithotomy position and swabs from the vagina (for examination for semen) having been taken, the parts are freely treated with a 20 per cent. solution of cocain. . . . An ordinary soft red rubber catheter is then taken, and over its point for about one inch or one and a half inches there is placed an ordinary india rubber condom, which is tightly bound into the stem of the catheter by a few turns of thread. . . . This arrangement is gently passed into the vagina; the point is then expanded either by inflation or by injecting a small quantity of warm water. . . . In this way the whole hymeneal margin is fully exposed to view, so that any interruption in its integrity is at once detected, however slight it may be. —*Lancet and Post Graduate.*

Miscellaneous.

THE ANAEMIA OF "HOOK WORM" DISEASE (UNCINARIASIS.)

The commission appointed by the United States Government, February, 1904, for the study and treatment of anemia in Porto Rico, has submitted a report to the governor of that island. This report covers two hundred pages, and is printed both in the Spanish and in the English language.

When the commission began its investigation in Porto Rico, it established a hospital, consisting of tent-wards, first at Bayamon, and later at Utuado, the most anemic districts of the island. Dr. Bailey K. Asheford was put in charge.

"This report (medicine) thoroughly discusses the subject of trophical anemia depending upon uncinariasis. Beginning with the etiology of the disease, we find a thorough description of the life history, incidence, modes of infection, and distribution of the uncinaria worm. Then follows a careful study of the symptomatology of the disease, the life history of the uncinaria in the human host, the course, prognosis and lethality. The sections on prophylaxis and treatment are especially good."

The conclusions of the commission are of interest: The disease known as "anemia" in Porto Rico is only a symptom of some definite pathologic entity or a consequence of some aberration of physiologic processes caused by improper diet, unhygienic surroundings, etc.

The finding of a specific disease which produces anemia, and the disappearance of this symptom under treatment, directed to the disease alone, while the general causes remain unmodified, lead us to believe that the anemia is due, in the great majority of instances, to this specific disease, *i.e.*, uncinariasis or ankylostomiasis.

This disease is caused by the presence of a small worm (uncinaria) in the intestines of the patient. This parasitic worm gains entrance to the subject generally by penetration of the larva through the skin.

The disease is marked by profound anemia and degeneration of vital organs, leading to chronic invalidism, and often results in death. About 90 per cent. of the rural population in all parts of the island are affected. The large number of sufferers must effect the social and economic status of the country.

The affectation is curable in the majority of cases, and is susceptible to restriction or elimination in proportion to the observance of elementary hygienic laws and treatment and cure of those already affected.

The few cases in which anemia is symptomatic of other disease or condition are the same as in other countries, and are produced by the same causes. As exceptions to the rule they tend to strengthen our conclusions that the prevalent anemia in Porto Rico is a consequence that three drugs were of value, namely, thymol, male-fern and beta-naphthol.

First, the patient received a purge of salts, and then on the following day was made to fast until one o'clock, and then was given doses not exceeding four grams; then another purge was given to remove the bodies of the parasite. The purpose of the first purge was to clear the intestines of mucus, etc., so as to allow the thymol to act. The thymol and purge treatment was continued once a week until the feces showed no more uncinaria. The commission generally used from two to four grams of thymol, and fifteen to forty grams of sodium sulphate before and after the thymol.

While the thymol kills the parasite, and the purges remove them from the intestines, these remedies only clear the body of the cause of the disease, and it is necessary to restore the blood to its normal condition, therefore, in many of the cases, the commission used Pepto-Mangan (Gude) in the intervals between the doses of thymol.

"A noteworthy fact is that none of the patients showed any digestive disturbance after the administration of Pepto-Mangan, although the remedy was used for many weeks in each case.

"When we remember the extremely low state in which most of these patients were found on admission, and the fact that several suffered from gastro-intestinal symptoms incident to their disease, this detail is by no means to be underestimated." —*The Southern Practitioner.*

Dr. W. E. Fitch says (*Southern Medicine,* Dec., 1904): "The medical profession are under obligations to Dr. Stiles (Government Zoologist at Washington), for the pioneer work he has done in ankylostomiasis. Before he published his studies on the subject, the disease was regarded as hopelessly incurable, because its etiology was unknown and its pathology unstudied. Now, uncinaria, through the pioneer investigation of Dr. Stiles, has become one of the most easily diagnosed and readily curable affections."

In the treatment of the anemia of "ankylostomiasis" we

The Canadian Practitioner and Review.

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Original Communications.

PRESIDENT'S ADDRESS.

By JOHN STEWART, M.B., Halifax, N.S.

Friends and Colleagues,—My first duty is to thank you for the honor you have conferred upon me in electing me to preside over this meeting.

I can assure you that my pride in this great honor is tempered by a feeling of very great responsibility and a sense of marked inaptitude for the duties of this position. And in thanking this Association for an undeserved honor, I wish to thank, especially, the most earnest, energetic and cheerfully laborious Executive which any President ever had.

I wish to express my sense of obligation for the presence of His Honor, the Lieutenant-Governor, whose more than eighty years of strenuous and honorable life give exceptional value to the kind words of appreciation in which he has just welcomed our Association to this city.

Permit me also to express my pleasure in having on the platform my dear old friend and colleague, the Honorable D. McN. Parker, one of the founders of this Association.

And now I bid you welcome, welcome to this picturesque province of Nova Scotia and to the city of Halifax.

I bid you welcome on behalf of the medical men of this province; for when it became known that the Canadian Medical Association was to meet here, there came in from all over the province, from the county societies and from individual practitioners, expressions of a desire to have a share in your entertainment, and

*Read before the Canadian Medical Association, Halifax, August, 1905.

therefore it is that we are here to-day as the guests of the Medical Society of Nova Scotia, and that we have listened to the warm welcome of its President.

In welcoming you to this place I should perhaps say a few words of introduction to a city and a province new, perhaps, to many of you. If you are interested in history you will find much here to occupy your attention.

In the early morning mists of our history we see Leif Ericson in his Viking galleys steer along our coast. Four hundred years ago the Cabots took possession of these regions for King Henry VII. And then for two hundred years the intrepid navigators of old France, De Monts, Champlain, St. Denis, LaTour, explored these bays and headlands.

If you can spare time to visit Annapolis you will find traces of the French occupation, and see still in good preservation the old powder magazine, the oldest European masonry in America north of Mexico, and built of stone brought from France. Midway in the province, you come to Grand Pre, with its crowded memories of the past, and its wide acres of fertile dyke lands, which we owe to the industry of the early French settlers. And in the extreme east you will find the historic ruins of Louisburg, where the sea birds cry over the rain-swept turf which covers many a gallant heart. Nova Scotia may indeed claim its share in thrilling memories of "old, unhappy, far-off things and battles long ago."

We can point with pride to the distinguished names of many Nova Scotians. I shall avoid the troubled waters of political life and will mention only the fact that two of the most distinguished college presidents in this country were Nova Scotians, viz., Sir J. W. Dawson, of McGill, and Rev. G. M. Grant, of Queen's. In literature we are proud of the reputation of Haliburton. The hero of Kars and the defender of Lucknow were both Nova Scotians. Our shipbuilders and our sailors have carried our name round the world, and it is safe to say that there are few ports in the world where you may not find a Nova Scotian sea captain.

This city of Halifax is crowded with historic memories. It was up this harbor that the ill-fated squadron of D'Anville, shattered and storm-tossed, came to anchor, to meet a more deadly foe than wind and wave in the pestilence which destroyed hundreds of brave soldiers. It was here that Cornwallis, stout soldier and sagacious statesman, arrived in 1749 and laid the foundations of this city. St. Paul's Church, built in 1750, is the oldest Protestant church in the Dominion of Canada, and the old churchyard of St. Paul's is one of the most interesting ceme-

teries in this country. In it were laid side by side the heroic dead who made the names of the *Shannon* and the *Chesapeake* famous.

In the old Provincial Building, where we hope to meet this evening, Mr. Lawrence Kavanagh stood in 1827, the first Roman Catholic member since the Reformation to represent a constituency in British dominions.

And there is another old building here, which to my mind should be full of interest for all Canadians. It was a Nova Scotian, Sir Samuel Cunard, who had the enterprise to start the first line of transatlantic steamships, and there are men in Halifax to-day who remember when the *Britannia,* the first Cunarder, came up the harbor and to the shipping office of S. Cunard & Co.

And may I draw your attention to our geographical position, and to our incomparable harbor. It has the largest dry dock on this side of the Atlantic; it is defended by one of the most powerful fortresses in the world, and at any hour of day or night, summer or winter, in any state of the tide, the largest and swiftest ships afloat may come alongside the pier, or leave it punctually, without delay or interruption.

I trust that when this Association meets next in Halifax it will find the western terminus of the fast Atlantic service safe in the keeping of the "Warden of the Honor of the North."

Finally, bear with me if I point to our educational institutions. Dalhousie University, the only undenominational college in the province, has not only supplied professors to several universities in the United States, but furnished a distinguished successor to the renowned Tait of Edinburgh, and only the other day, sent one to the University of Birmingham. We have also a medical college whose graduates are now dotted all over the Dominion and the United States, reflecting credit on their province and their Alma Mater. There is the Institution for the Deaf and Dumb, where results are obtained equal to those of any similar institution anywhere; and finally we have this School for the Blind in the hall of which we are met, which is presided over by Dr. Fraser, a gentleman second to none on this continent in the skill and success of his methods, and whose marvellous personality overcomes all disabilities and inspires all who come in contact with him.

This is not the first occasion on which the Association has met in Halifax.

In 1875 the Association first met here, and again in 1881, when the General Secretary was a young Montreal physician, whose name is now a master word in the schools of Esculapius

the world over—the Regius Professor of Medicine in Oxford. At the meeting of 1881 the attendance was 53; to-day we have already registered over 200.

It is only fitting that I make reference to some of those who were with us then and who to-day are not. The President was Dr. G. E. Fenwick, of Montreal, a distinguished surgeon, who occupied the chair of Surgery in the University of McGill for fifteen years. The Vice-President for Nova Scotia was the late Dr. R. S. Black, one of the leading physicians of Halifax for many years, a man of wide culture, and especially familiar with Spanish history and literature.

There are two names to which I wish particularly to refer in this place on account of their connection with this province and their interest in this Association. The late Dr. Edward Farrell was one of the foremost citizens of Halifax, and took a leading part in our political life, having been a member of our legislature. He was one of the founders of the Halifax Medical College, where he held the chair of Surgery from its foundation until the time of his death, and his admirably lucid, well-ordered and emphatic style made him one of the best lecturers whom I have ever heard. He was surgeon to the Victoria General Hospital for thirty years. He took a keen interest in the subject of tuberculosis, especially in the organization of methods to prevent the dissemination of the disease, and was appointed by the Dominion Government to represent us at the Congress on Tuberculosis in Berlin. And it was in the discharge of his duty as a member of a commission appointed by our own local Government, to select a site for a sanitarium, that he contracted his fatal illness, through exposure to cold and wet when driving in the country; and on the first day of this new century he passed away from among us, but the brave and cheerful spirit, the ready wit, the warm, kind heart are memories that remain.

And what can I say of Dr. Wm. Scott Muir? I may say, I believe, that no member of this Association was better loved or more heartily welcomed to its meetings. He had been a Vice-President, and upon at least one occasion he was nominated for the Presidentship, but generously insisted on giving way to others. He was a very regular attendant at our meetings, and his stalwart figure and cheery voice had become familiar to the profession throughout Canada. His business ability and his knowledge of affairs made him invaluable in committees, and his contributions to the scientific work of the Association were marked by keen observation and practical common-sense. He was my own dear friend, and I shall not trust myself to say more of what his loss has been to us.

And so one by one, just as we learned to value them more, our comrades fall, and what can we say but

> "Fare you well:
> Hereafter, in a better world than this,
> I shall desire more love and knowledge of you."

It is perhaps a weighty sense of the responsible position in which you have placed me that gives to my thoughts to-day a somewhat serious turn.

I look upon this great assembly, I think of the years of study, the expensive education, the physical and intellectual toil, the laborious days and anxious nights, and when I consider the results I am tempted to ask—what is the good of it all? We toil to save, and how often it is that the valuable lives, the bread-winners, the wise, the strong, the true, are taken, and we succeed in saving the idle, the dissolute, the degenerate. There is only a sense of futility, there is horror in the thought that our art may in unworthy hands be degraded to be a servant of evil passions.

And have all these then—our brothers and our forebears—died in vain? Have their lives been wasted, and would it have been better had they had no part in aught that's done beneath the circuit of the sun?

Perish such thought! These dark imaginings are nothing but rank pessimism, and pessimism is fatal to us of all men. Of all men the medical man must be an optimist. If our work is to save and prolong life, we must believe that life is something worth having and worth keeping, or we are not true to ourselves, and are false to other men.

Now, what is the value of life? Character. And what makes life worth having and worth keeping?

The more we reflect upon human life in all its manifestations, the more we do become convinced that its true criterion is character. To the unthinking it may seem that this subject is outside our province, and that health and character are in different categories. But we cannot dissociate the physical from the intellectual and moral elements of our nature. As anatomists we may study the physical framework of man, but as practitioners of medicine we must consider the living man as a body, soul and spirit.

Our nature is threefold, and health and character pertain to each component, the Physical, the Intellectual and the Moral. We may admit that so far as we can see, perfect physical health may exist with feeble intelligence and degenerate morals, but the ideal condition for which we should aim is the balanced blend and perfect equilibrium of all these elements. And even though

at first glance it may seem that one component may attain perfection, while the others are defective, a close observation convinces us that it is not so. The brilliant intellect is hampered in its working by the diseased body which forms its transient tabernacle; the "eye sublime," subdued to that it works in by a vile spirit, loses its brightness, and

> **"Faults in the life breed errors in the brain,**
> **And these reciprocally those again."**

And as Maudsley put it the other day at the British Medical Association, "Mind works in every function of the body; a sound body is the foundation of a sound mind and the lunatic is lunatic to his finger ends." We cannot think soundly about life if we ignore this essential and indissoluble trinity. Experience tells us that in our work of detecting, preventing, eliminating disease, we cannot treat our patient to advantage if we regard only his physical condition and neglect consideration of his mental equipment and moral proclivities. Indeed, the manner of man our patient is is determined more by those invisible forces than by his corporeal form, or as we have it in the sayings of the Wise Man, "As he *thinketh* in his *heart* so *is* he."

And it is with the community as with the individual: that which makes a nation great is not the wealth of its people, or their intelligence, but their good name. It is because I believe that the medical profession may have a large influence in moulding the spirit of a nation, that I wish in the hour which custom allots to me here, to offer a few remarks on National Character and Public Health.

How may our national character help or hinder us in our work, and how may we, as the guardians of the public health, help to make or mar our national character?

The public health laws of a country will depend largely on the character of the people. The character of the people will be conditioned largely by their public health, that is, by that standard of health of the individuals composing the nation which, as a national ideal, all the people are interested in and willing to make sacrifices for. This is Public Health in the largest view.

And first let us consider some of the features of national character which may influence public health.

There is *love of liberty,* and a free people is usually a vigorous and healthy people.

But there is a liberty not according to knowledge. When an individual claims the right to act according to his own judgment in matters of which he is profoundly incapable of judging,

his boasted liberty may prove a perilous possession to himself and his neighbors. When a community refuses to be bound by laws which Sanitary Science has declared to be necessary, it abuses its liberty and may bring serious damage upon itself. The laws of health cannot be broken with impunity, and this spurious love of liberty frequently stands in the way of sanitary reform.

We have a striking instance of it at present in the stupid rebellion against sanitary laws shown by many communities on the lower Mississippi in the present epidemic of yellow fever.

From the thought of liberty to that of bondage may seem a strange step, yet the next national characteristic which I mention as having an influence on public health, namely, the worship of material things and the feverish haste to accumulate wealth, lays upon us a bitter and grievous bondage. The public and the representatives of the public are too apt to regard with impatience, if not with scorn, the claims of any interest which does not seem to have immediate or direct bearing on the great national occupation of money making.

There is an epigrammatic expression in the works of Aristotle which might well be inscribed in letters of gold over the council chamber of our legislatures and our boards of trade. It may be freely translated thus, "It is not seemly for a free people to be always seeking for cash returns."

I think the Greek philosopher saw the glitter of the golden manacles and would warn us, if we value freedom, to set our affections on other things than gold.

This national characteristic, disinclination to invest in medical securities, is, perhaps, due to various things. It is partly due to ignorance, to an incapacity of appreciating scientific teaching, to a hesitation in trusting the expert opinion of Science—for which, perhaps, Science herself is somewhat to blame. It is not entirely the fault of avarice. When our people are convinced that any measure is for the public weal, they are generally willing to aid. And I may perhaps draw attention here to the fact that the first public sanitarium for tuberculosis, the first in Canada erected as a Government work, is now in operation in Kentville in this Province.

But, as a rule, there is great difficulty in inducing corporations and municipalities to expend a reasonable sum in carrying out the details of a public health system—to pay the water supply, drainage, sewerage, removal of garbage, disinfection. It is not too much to say that apathy in regard to questions of public health is a national characteristic.

Like the Sybil with her precious scrolls, Hygeia comes to Demos, and Demos will not buy.

And the yearly tale of death and disease preventable by sanitary measures, increases, and perhaps the only effectual clarion to rouse the indifferent will be—as it has been before in the world's history—a pestilence.

Possibly if the public could see the mere financial loss incurred by preventable disease, the loss of time, the inefficiency of workers, the increased rates to maintain the families who have lost the bread-winner, they would be willing to give more to the Health Department.

There is a feature of our public life which I think may fairly be described as a national characteristic, and that is our tolerance if not encouragement of quackery. I mention it here because I wish to point out the great injustice of this to our profession.

The youth who aspires to the practice of medicine is required by the laws of his country to undergo a certain course of study, tedious and expensive. He has to pass certain examinations and give proof of familiarity with the requirements of his profession. He has to satisfy the authorities as to the integrity of his moral character before he is allowed to begin practice. And now see him, embarking on the practice of his profession. From his window he sees the apothecary's shop, and knows that for one patient who has gone there to have a prescription filled, a dozen go to buy some proprietary medicine. He buys the morning paper and finds one-tenth to one-fifth of the space for which he pays taken up with advertisements of nostrums, often with testimonials signed by otherwise intelligent and moral people. He dines at his club and he hears nothing but the wonderful cures wrought by some itinerant quack who has never fulfilled one requirement of the Medical Act. Truly Demos loves the quack and seems to have a special spite at him who would practise his profession scientifically in accordance with the noble spirit of the Hippocratic oath.

There are, indeed, many ways in which the traits of national character may influence the health of the people.

In the Report of the Royal Commission on Physical Deterioration, no evidence seems to me more interesting than that of Mrs. Close. This lady, who has given her life to the study of the domestic conditions among the laboring classes of almost every country in Europe, has no doubt of a deterioration in the physique of the laboring classes in England. And the explanation of this she finds in a diminished sense of duty, a debased ideal of the duties of wife and mother. Love of

amusement and the attractions of the theatre interfere with the old-fashioned domestic economy. Houses are untidy. Food is badly cooked. Early rising is a vanished virtue. The children are hurried off to school without proper breakfast, and the husband finds in the public house the comfort he is denied at home. The picture is too true and its replica may be found in every town in Canada.

And now, how may we, in the exercise of our daily calling, contribute to the development and growth of national character?

In the first place, we should accustom ourselves to remember that the body with which we deal is of value only as the tenant and instrument of an indwelling spirit, and that the health of the body is our care simply because its ill-health may hamper the action of the intellectual and moral energy within it.

When we prescribe diet and exercise, let us remember that the luxury and excess and love of ease, which are the most potent factors in disease, injure mind and soul as well as body. Let us press the claims of temperance—that true temperance which walks the golden midway, and turns neither to asceticism nor to indulgence.

In the love of Canadian youth for manly exercise we have a most powerful lever for raising the standard of health and morals.

If we are consulted as to occupation, let us sing the praise of the simple life. Civilization is becoming terribly complex, and it seems on all hands to fungate into luxury. And history points a warning finger to the past. When culture joined hands with luxury decadence was already at the door.

This is an age of sedentary occupations, and a large proportion of the ills which we are called to treat owe their origin to the exigencies of the sedentary life. It is not a natural life for man.

Will it be thought very much out of place if I say, let us honor the farmer. His is the only natural, the original, and the essential work. There is a moral in the fable of Hercules and Antæus. It was not until Hercules had lifted the giant bodily from the ground and so broke the magic contact that he was overcome, and the prescription for many of the ills of the body and of society to-day is in the cry, "Back to the land!"

I have spoken of occupation as bearing on health and character. There is one other fact in our social life to consider, and that is our amusements. Indeed, among some people this question seems to take precedence of work. Amusement and relaxation are necessary, but to give them so prominent a place in our life as they appear to occupy to-day is a menace to the health of the body

which they are meant to secure, to the intellectual powers and to moral character.

Pleasure takes precedence of duty, and complaisant sophistry may even justify this order. To scorn delights and live laborious days is now considered folly. We amble along the primrose path of dalliance and avoid the "asperous way that leadeth to the house of sanity."

It is a delight and a hopeful omen to see an interest taken in athletics, and to know that our country takes such an honorable place in all manly exercises. But for one young man whom you will find on the football field, or plying oar or paddle, you will find many who simply waste their time, their only interest in athletics being the spectacular interest of a match or the dubious financial result of a bet. If we could only influence these young men to take a more heroic, a more manly view of life, we should be doing them and our country a service.

Even in our sports there is room for some earnestness, and it might be well if we took our pleasures, as Froissart says our ancestors did, seriously, and sympathised with the spirit of the old English ballad of Ulysses and the Syren:

"To spend the time luxuriously
Becomes not men of worth.
.....

".....suppose there were
Nor honor, nor report,
Yet manliness would scorn to weare
The time in idle sport:
For toyle doth give a better touch
To make us feel our joy:
And ease finds tediousness, as much
As labour yeelds annoy.

.....

"But natures of the noblest frame
These toyles and dangers please:
And they take comfort in the same,
As much as you in ease:
And with the thought of actions past
Are recreated still,
When pleasure leaves a touch at last,
To shew that it was ill."

This was the "great spirit of high desire" of the Elizabethan days.

But in addition to what we do effect in this way in our own generation, we and our ancestors wield a great power in the laws of heredity.

The observation of centuries and the universal experience of every-day life, no less than the laborious and well-planned experiments of science, tell us that the organism of to-day is the resultant of forces acting in the past, and the diversity of operation of these forces is what gives Nature her infinite variety. To us who see every day the working of the inevitable law, which visits the sins of the fathers upon the children and to whom the phenomena of reversion and atavism and variation are constantly present, to us heredity is one of the great powers of Nature. And we believe that by a careful application of scientific principles to the environment, education and occupation of our race, we may and can exercise a beneficial determinant action on generations yet to be, eliminating disease, stimulating and clarifying mental processes, strengthening and purifying moral qualities.

But, enormous and far-reaching as we believe the power to be of the laws of heredity, we must not allow them to dominate us. They are not the forces of a blind, inexorable Fate. These laws are well ordered in all things. When, in view of the depressing influences of the researches of Lombroso and his school, we feel that we are all smitten, when each scans anxiously his brother's face for stigmata, or fancies himself the bearer of a hall-mark of some degeneration, let us remember that not only can we, to some extent at least, control the working of the laws of heredity, but so far as we ourselves are concerned, can bid them defiance.

We may, if we will, say, "Evil, be thou my good," and turn our backs upon our good angel who points us to an honorable ancestry and bids us follow in their path. But, when the Angel of the Pit, with mocking leer, that "Man of Hell who calls himself Despayre," bids us throw up our hands, tells us we are the captives of circumstance bound in millennial chains, tempts us to give up the hopeless struggle, we may, if we will, say, "Stand thou on that side, for on this am I." We must not forget that divine part of us, that mysterious, undefinable, undeniable power for good or evil—the human will.

Thirty years ago a young man lay in the Royal Infirmary in Edinburgh. Fortune had not smiled upon him and now, maimed and crippled for life, that life seemed "Doomed to dumb forgetfulness a prey." But not to despair. The "Star of the unconquered will" rose and stood over the lonely bed of William Ernest Henley, and inspired these lines, the finest assertion of the Free Will I have ever seen:

"Out of the night that covers me,
Black as the pit from pole to pole,
I thank whatever gods may be
For my unconquerable soul.

"In the fell clutch of circumstance
I have not winced nor cried aloud.
Under the bludgeonings of chance
My head is bloody, but unbowed.

"Beyond this place of wrath and tears
Looms but the Horror of the shade,
And yet the menace of the years
Finds, and shall find me, unafraid.

"It matters not how strait the gate,
How charged with punishments the scroll,
I am the master of my fate:
I am the captain of my soul."

"Sir," said Dr. Samuel Johnson, "the man who has vigor may walk to the East, as well as to the West, if he happen to turn his head that way."

Heredity may condemn us to a life of struggle with bodily weakness and mental incapacity, to "Defects of doubt and taints of blood." It cannot chain the free spirit, and he who can say, "I will, I will not," is still a man.

We, the members of this Association, as practitioners of the Healing Art, are the heirs of a great past. The Masters of Medicine have passed from our world, but their influence survives—their spirits still live.

Nothing is plainer in the study of the lives of the greatest of our predecessors than the influence of great ideals. From the days of the grand pagan whom we call the Father of Medicine, and whose recognition of the power of spiritual forces is so clearly seen in the oath which he laid upon his successors, to the great authorities of to-day, we can trace the power of faith in the Unseen Universe.

Let me quote from the illustrious Pasteur: "Happy he who carries with him a God—an ideal of beauty, and who obeys him. An ideal of Art, an ideal of Science, an ideal of Patriotism, an ideal of the virtues of the Gospel."

And if we are to have strength for our work, courage and hope to cheer us in our long contest with all these shapes of foul disease, we must bear in mind the supreme importance of high ideals—of life—and of man.

"You touch God," said Novalis, "when you lay your hand upon a human body." The spark of life we tend is a part of the divine, and immortal.

"The soul that rises with us, our life's star,
Hath had elsewhere its setting,
And cometh from afar."

We deal not with Dust and To-day, but with Life and Forever. And when we realize this, our own nature becomes ennobled that it works in and can rise to still greater power.

We who deal perforce so largely with the material and perishable, if we would keep sight of the indestructible and immortal, should cultivate a power of detachment, should rise through the cloudy region of the world, and accustom ourselves to the free air and larger atmosphere of a universe.

As the Healer of the world came from beyond its confines, so we who would help in the healing should be able to rise into the ether, where we can have a proper perspective of Time. We should visit the ethereal region where, with Amiel, we may "Listen to the music of time and the hosannas of the world," or with our own Wordsworth hear "Oftentimes the still, sad music of humanity," and be conscious of

> "A presence that disturbs us with the joy
> Of elevated thoughts: a sense sublime
> Of something far more deeply interfused,
> Whose dwelling is the light of setting suns,
> And the round ocean and the living air,
> And the blue sky, and in the mind of man."

And how may we best acquire this power but by the study of our subject—the philosophic study of man?

What our profession requires to-day, even more than an increase in scientific knowledge, is more of the study which gave character to the great masters of the past, and a realization of the grandeur of the divine possibilities in man. True, we see much of the lower nature, weakness and suffering and sin, but we also see in every soul the capacity of Honor, Courage and Love. Let us rather look on these. "Whatsoever things are true, . . . whatsoever things are pure, . . . whatsoever things are lovely, . . . if there be any virtue, . . . let us think on these things."

RADIUM: ITS VALUE IN MEDICINE.*

By MYRON METZENBAUM, B.S., M.D., Cleveland, Ohio.

The following serves to explain the accompanying photographs of cases treated by the aid of radium. The paper is virtually an abstract of a chapter contributed to the "International Clinics," Vol. IV., Series XIV., published by Lippincott & Co., Philadelphia.

When radium of at least 7,000 activity, contained in hermetically sealed tube, is placed on the unbroken skin for a period of at least three hours, it may produce an irritation which may finally result in ulceration of the skin.

When tubes containing radium of 15 grains each of from 40 to 100 activity, and tubes of 20 milligrams of 7,000 activity are placed on ulcerated areas, they produce sensations not unlike the feeling one experiences in a burn when standing near a hot stove. The radium also causes a peculiar pink injection of the ulcerated and surrounding tissues, which may last for a few hours to as long as twenty-four hours.

From very careful observations no difference could be noticed in the physical or therapeutic results, when using radium of 100 activity or 7,000 activity.

Report of Cases.

In all cases the tubes containing radium were placed directly on the area to be treated and held in place by strips of adhesive plaster. The tubes of radium varied from 40 activity to 7,000. A treatment was given every three or four days and for thirty-five to forty-five minutes each time. No internal treatment was given, and excepting the application of hot water to the parts no local treatment whatsoever was used.

Case 1. —Rodent ulcer in a woman, aged 57, extending from the middle of the right supra-orbital ridge to within two and one-half centimetres of the ear and well down on the cheek, causing a loss of the eye. X-ray had been applied for a period of eight months, but the ulcer continued to spread. Applied tubes of radium of low activity on April 14th, 1904; after fifteen days the ulcerated surface had healed over. The photograph, taken after forty days, shows entire ulcerated surface replaced by fine white scar tissue. This case has remained well for more than one year.

* Read at meeting of Canadian Medical Association, Halifax, 1905.

Case 2.—Male, aged 27. Four years ago a lupoid patch developed to the right of the chin, covering an area of one and one-half inches in width, three inches in length. The ulcerated area was dissected out and followed by a course of X-ray treatment. The surface healed, leaving a scar of very firm fibrous tissue, which drew down the angle of the mouth, causing an impediment in his speech. February, 1904, an ulcer the size of a quarter developed on the right side of the scrotum. This did not heal under various methods of treatment for a period of three months. May 23rd, 1904, applied radium of low activity to the ulcerated area, and, after three applications, the same healed, and has remained healed ever since. To the old scar on the face radium of low activity was applied at four different times. This caused the firm, fibrous scar to become soft and pliable, so that the angle of the mouth is no longer drawn down to the same degree, nor is it apparent as before.

Case 3.—A young lady, aged 22, had a large lupoid patch on her right cheek, of five centimetres in length, two and one-half centimetres in width, which has healed after twelve different cauterizations, leaving a rather rough and firm scar. Around this healed area was a rim, one centimetre in width, which was red; in many places there were denuded areas; in all there were fifteen applications of the tubes of radium, which caused the red rim to disappear and the small ulcerated areas to heal; also the firm and somewhat rough old scar became soft and pliable, so that it is but slightly noticeable.

Case 4.—Woman, aged 71, developed a small epithelioma on her right cheek, measuring one and one-half centimetres in diameter. The glands of the neck were not infiltrated. The radium was applied nine different times and caused the depression to fill in and heal over. One year has elapsed since the last treatment, and excepting for a slight redness of the area, nothing is noticeable.

Case 5.—Woman, aged 40, had a mole above the right supra-orbital ridge. She persistently picked at this until she says she pulled it out clear from the roots. Two and one-half months from this time I saw her. There was a deep hole where the mole had been with a diameter of two centimetres, extending down to the periosteum of the bone. The edges were highly inflamed, as well as the surrounding tissue, and there was a discharge of blood and serum. This is undoubtedly an epithelioma developed by irritating the mole. During November she received eight applications of the radium, and

the deep, ulcerated surface has filled in and healed over so as to be barely noticeable. At the present time this case seems perfectly well.

Case 6.—Woman, aged 32, has very extensive lupus vulgaris extending over the entire right side of her face, from the ear up into the scalp, down to the cheek, and back to the angle of the jaw and around to the chin. Various methods of treatment had been tried during many years. In all, she has had fourteen applications of radium, and great numbers of the elevated areas have smoothed down, and there is a great amount of new intervening scar tissue which is soft and pliable. Due to illness, no further applications have been made, and all the healed areas have remained well, so this case gives fair promise of becoming entirely well.

Conclusions.

From these cases the following inferences may be drawn, namely:

1. That the rays coming from radium, when the same is contained in hermetically sealed tubes placed directly on an ulcerated area, that a slight sensation will be felt in from seven to eight minutes, but when the skin is unbroken, no sensation is felt, even if the tubes of radium remain on for a period of thirty-five minutes.

2. If these tubes of radium are kept on an ulcerated area for a period of thirty-five minutes they produce an increased redness of the diseased part and cause an erythema of the surrounding tissue which may last for several hours or as long as twenty-four hours.

3. That radium rays have caused an ulcerated lupoid area in three cases, an ulcerated area of a rodent ulcer, and two small epitheliomata to heal over, and that these former ulcerated areas have become firm, white scar tissue, which gives them every appearance as though they were healed, and in one case of very extensive lupus vulgaris it has produced such marked improvement that the case may reasonably be considered as healed.

4. That the rays of radium have caused the firm, rough scar tissue in two cases of old lupoid areas to become soft and pliable, and therefore are not as disfiguring.

5. These effects of radium have been very rapid, considering the usual intracability of this class of diseases, and consider-

ing that in all cases various therapeutic measures and means have been tried repeatedly with little or no effect.

6. What is of very great practical value, if radium has a therapeutic use, namely, these results have been obtained with tubes of radium of low activity, costing but a few dollars, while it is supposed that only radium of high or very high activity, costing several hundred dollars a tube, possessed any therapeutic properties.

7. The treatment in none of these cases commenced longer than a year and a half ago, and while four of these cases have remained healed for a period of over one year, yet many years must elapse to see whether the disease will not reassert itself again before the same can be pronounced as cured. And if, after a lapse of several years, cases of lupus, rodent ulcer or epithelioma, treated by the aid of radium, remain cured, then radium is only to be classed with the Finsen light and the X-rays and surgery, as one of the methods in the treatment of small epithelioma and rodent ulcers.

8. In the two figures of the false joint of the ulna is seen a very good example of the comparative value of radium and X-rays in the examination of bones directly. The X-ray is a three-minute exposure, while the radium picture is a one-week exposure, from which can be concluded that the X-rays show far greater differentiation between the bone and connective tissue than does radium, and since it requires at least several hours for the radium rays to penetrate the flesh it would, therefore, be impracticable to use radium for making skiagraphs.

9. The conclusions drawn from nearly one hundred experiments give positive proof that while suspending tubes of radium of various strengths for long periods in various solutions and various powders, that neither these solutions nor the powders are capable of affecting photographic plates, and are, therefore, not rendered radio-active and, therefore, neither the solution nor the powders are rendered radio-active, and can in no way affect the metabolism or pathology of living organisms.

Monographs on the therapeutic and physical properties of radium will be cheerfully sent to any who may desire the same.

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THE GROWTH AND ORGANIZATION OF THE MEDICAL PROFESSION IN NOVA SCOTIA.*

By D. A. CAMPBELL, M.D., Halifax.

Mr. President and Gentlemen,—The subject upon which I shall endeavor to address you may be entitled, "The Growth and Organization of the Medical Profession in Nova Scotia."

The satisfactory condition of the medical profession in this province to-day has not been attained without much effort and a long history. The present standard of medical education is sufficiently high, and the average attainments of the rank and file of the profession satisfactory, so that everywhere the public can obtain the services of men capable of coping with the ordinary emergencies met with in practice. The members of the profession are respected, and exercise considerable influence in social and public affairs. In their organized capacity they enjoy self-government—a privilege which they have used for the public benefit, but have never abused. There are active and energetic associations for mutual improvement and protection. The grosser forms of quackery are not prevalent, and what may be called "medical heresies" are scarcely represented. It can be affirmed without exaggeration that the position of the profession in Nova Scotia compares favorably with that which obtains in other provinces of Canada or in the states of the American Union.

It is now just three centuries since the first European settlement was made in this region of North America, at Port Royal, now Annapolis Royal, in this province, which is, thus, the oldest continuous European settlement on this continent north of Florida. The settlement was really made and the colony established by Poutrincourt, under a grant from de Monts, who had arrived there the previous year, 1604, with a grant, from Henry IV. of France, of all the territory between the 40th and 46th parallels of latitude. The Acadia of the seventeenth century was thus a very wide region, including the present New Brunswick, and, indeed, for a long time, the name Nova Scotia was applied to the same region. Sieur de Monts made many and extensive explorations during the summer, crossed the Bay of Fundy, and established a settlement on the island of St. Croix. The colony of St. Croix suffered great hardships during the winter of 1604-5; and it is from that

*Read before Canadian Medical Association, Halifax, August 22nd to 24th, 1905.

settlement that we have the earliest account of anything of strictly medical interest in Acadia. That year Samuel de Champlain—a name illustrious in Canadian history—was with de Monts at St. Croix, and he has left a most interesting account of a serious malady which attacked the colonists. Here let me quote part of Champlain's narrative:

"During the winter, many of our company were attacked by a certain malady called the mal de la terre, otherwise scurvy, as I have since heard from learned men."

In 1613 the colony of Port Royal was greatly injured by an expedition from Virginia; war between France and England followed; but upon the restoration of peace, in 1632, France was still permitted to hold Acadia.

The work of colonization was resumed under the auspices of the new company of France; some sixty families of farmers, fishermen and artisans were brought over, settling first at La Have, and subsequently at Port Royal.

From the final cession of Acadia to Great Britain and the peace of Utrecht, in 1713, to the year 1749, when Halifax was founded, not the slightest effort was made in the direction of securing British settlers for Nova Scotia. France, by the retention of Cape Breton and the fortification of Louisburg, was enabled effectively to checkmate the plans of England. When war broke out between the two nations in 1744, the governor of Louisburg promptly sent an expedition to regain Nova Scotia. Canso was attacked and destroyed, and it was determined to capture Annapolis—which meant the capture of all Nova Scotia. This attempt failed, but it so exasperated the New England people that they resolved to secure possession of Louisburg. A scheme, planned by a lawyer and executed by a citizen commander, with an army of artisans, fishermen, farmers and lumbermen, snatched, by sheer audacity, from the grasp of France, the great stronghold of Louisburg, defended by a garrison of veterans. At the close of the war, however, Louisburg, conquered by arms, was restored by diplomacy. A storm of indignation swept over New England, which had the effect of quickening a plan long cherished by the British government, of establishing a permanent settlement, and strong military station, on the Atlantic coast of Nova Scotia, as a counterpoise to Louisburg, and Halifax was founded in the early summer of 1749.

A fleet of transports, with 2,576 immigrants, of which 1,546 were adult males, sailed for Chebucto Bay, under the command of Hon. Edward Cornwallis. New Englanders also came

in considerable numbers, and contributed largely to the success of the undertaking. A little later a German colony was planted at Lunenburg.

In 1758 Louisburg was captured by General Wolfe, and Quebec in 1759. With British rule thus assured immigrants from New England and elsewhere soon began to flow into the country and to occupy the fertile lands and the best fishing stations, so that by 1770 there was an estimated population of 13,000 in the Nova Scotia of that day.

During the progress of the war between England and the revolted colonies of New England, many adherents of the Royal cause were driven from their homes, and sought refuge in Nova Scotia. After the evacuation of Boston about two thousand refugees came to Halifax with the British forces. When the war closed large numbers of Loyalists withdrew from the United States, the greater part settling in Ontario and Nova Scotia.

Among the 2,500 settlers who came to found Halifax in 1749 there were twenty-eight medical men. Eleven of the number were accompanied by their families, which indicates that they, at least, came with the intention of staying in the country. All, probably, were army surgeons, thrown out of employment at the termination of the war with France, who were thus willing to accept a free trip to America and a grant of two hundred acres of land. How bitter must have been their disappointment when they beheld for the first time an unbroken expanse of forest, and realized that this was the home upon which they had based great hopes. Some found employment in connection with the hospital which had been established, but this did not last long, as the home authorities complained to Cornwallis that he supported too many surgeons and apothecaries. Only three out of the twenty-eight appear to have had the courage to face such a future. These remained with the other colonists, shared their hardships, and achieved some measure of success. The names of the three were Robert Grant, John Steele, and Alexander Abercrombie. These were the pioneers in medicine in Halifax. Grant became a member of His Majesty's Council; Steele, a member of the House of Assembly; and Abercrombie, when he died twenty-eight years later, was deeply lamented, both for his medical skill and his benevolent disposition. The fate of the other twenty-five is unknown.

Only one physician accompanied the 1,500 German colonists who settled at Lunenburg, and it is uncertain whether he re-

mained in the country. The New England and North of Ireland settlers, who came to the province prior to the Revolutionary War, were usually able to obtain medical aid. The missionaries, who regularly visited the sparsely settled and remote districts, had some medical knowledge. At some points the garrison surgeons looked after the sick. A few physicians came from New England and engaged in practice in the more thriving districts. Of these latter the professional knowledge and skill may not have been great, but they were usually resolute, enterprising men, and useful members of the community in which they lived.

A large number of medical men acccompanied the Loyalists. They were well qualified. The majority had served as surgeons during the war, and their influence in improving the status of the medical profession was marked, owing to their number, skill, and strong personality.

The estimated population of Nova Scotia, in 1790, was about 35,000. The number of practitioners in the province at that time, as far as I have been able to ascertain, after considerable research, was thirty-five, a very large number when we consider the slender resources of the inhabitants and the limited extent of the settled area. The presence of so many practitioners at that early period is explained by the circumstances that fully one-third of the number held permanent appointments in connection with the military establishments at Halifax, Windsor, Annapolis, Shelburne, and Sydney—appointments which they had received as a partial compensation of the losses they had sustained by the Revolution. Their official duties were light, and gave them ample time for general practice. After the founding of Halifax about nine-tenths of the physicians who came to Nova Scotia came from New England and of the thirty-five practitioners in 1790 fully three-fourths were Loyalists. The latter did much to create that ingrained respect and loyalty towards the profession which is a characteristic of Nova Scotians, and this was accomplished by the individuality and force of character of those men, as well as by their professional skill. The old inscription on the tombstone of Dr. John Haliburton, in the old St. Paul's Cemetery, might not unfittingly be applied to each one of them:

> "If unshaken loyalty to his King, steady attachment to his friends, active benevolence to the destitute, and humble confidence in God, can perpetuate his memory, he will not be forgotten."

After 1790 no distinctive event stands out from which we can look back upon the growth of the profession, until the year 1828, when an Act to regulate the practice of medicine was passed by the legislature. During this period of thirty-eight years the population had risen from 35,000 to 150,000—an increase largely due to an extensive immigration from the Highlands of Scotland. The older settlements had made substantial progress, and afforded an improved field for practice. The number of medical men had increased from 35 to 65; but the ratio to population had fallen from one in about 1,000 to one in about 2,300.

Two of those in practice in 1790 still survived—Jonathan Woodbury, of Annapolis, who came to the province as early as 1763, and Joseph Norman Bond, of Yarmouth, a veteran of the Revolutionary War, who enjoys the distinction of being the first medical man to perform vaccination in Nova Scotia. This was in 1802.

The additions to the ranks of the profession, during this period, were principally British graduates, who brought with them the traditions and customs of the profession in Great Britain.

During this period a few medical men also came from the United States. About 1800, we note the appearance of native Nova Scotians, who had studied either in Great Britain or in the neighboring republic. Towards the close of this period there was a decided increase in the number of these. The first Nova Scotians were: Samuel Head, of Halifax, son of Dr. Michael Head, who came from Ireland to the province shortly after 1756; David B. Lynd, of Truro, a graduate of the University of Pennsylvania; Robert Bayard, of Cornwallis, a graduate of Edinburgh, better known in New Brunswick than in his native province; and W. B. Almon, of Halifax, also an M.D. of Edinburgh, and son of Dr. W. J. Almon, who first came to Halifax during the Revolutionary War. All of these were in practice in 1810.

The preamble to the Medical Act, and a subsequent amendment, point to the presence of a number of unqualified practitioners, especially in districts where medical aid could not be easily obtained. Many of these were men who had gained some knowledge, either through apprenticeship or a partial course at some college. Generally speaking, they were a deserving class, and should not be regarded in the same light as quacks and pretenders.

The next important step in the progress of the profession

was the formation of the Medical Society of Nova Scotia in 1854. This association grew out of, or rather was an expansion of, the Medical Society of Halifax, which had been formed in 1844.

Between 1828 and 1854 the population had nearly doubled, chiefly through natural increase, and the number of practitioners had risen from 65 to 120. An analysis of the list of practitioners in 1854 indicates that more than one-half of them had been born in the province. Of the total number 50 per cent. had been educated in the United States, 35 per cent. in Great Britain, and 17 per cent. were provincial licentiates. During this period the medical supply reached its lowest ebb, because but few practitioners came from abroad, and the cost of a complete medical education in a foreign country was greater than many Nova Scotians could afford. Quackery became prevalent and offensive. The petitions of medical men to the legislature had been disregarded, and the conviction became general that the only way to secure a remedy was by united action; hence the formation of the Medical Society of Nova Scotia.

The next period, extending from 1854 to 1872, when a new Medical Act of great importance was secured, is characterized by a less rapid extension of the population, owing to the fact that the era of emigration from the province had begun. But for the people who remained there was a better medical supply.

The new medical society soon made its influence felt. For some years its efforts were concentrated upon safe-guarding the interests of the profession and the promotion of measures to improve the public health. In 1856 the old Medical Act was amended, and new provisions were added to repress unqualified practice. A tariff of fees was framed; a code of ethics adopted; better remuneration for public services was secured; health legislation was improved, and an act for the collection of vital statistics was obtained.

The union of the provinces in 1867 widened the outlook of the profession; and the new order of things was promptly signalized by the formation, that year, of this Canadian Medical Association. And here permit me to refer to the fact that the honor of first presiding over the deliberations of this important organization was accorded to a Nova Scotian, a gentleman of high standing in his profession, but one whose widely-recognized pre-eminence as a political leader and constructive statesman has caused his professional career to be almost forgotten—I refer, of course, to the Hon. Sir Charles Tupper.

And I cannot omit mention of the second president of this association, also a Nova Scotian, and the ablest practitioner in the province, chosen for that place of honor because of his sterling character, public spirit and successful professional career, one who fortunately is still with us, an inspiring influence for all that is noble and good—I refer, of, course, to the Hon. Dr. Parker.

In the same year, 1867, the Medical Society of Nova Scotia was reorganized. Up to that time the society had held all its meetings in Halifax. It was then decided to hold the annual meetings at different points in the province, with the view of securing the more hearty co-operation of members in the various parts of the country.

In 1867, also, a medical school was founded in Halifax in connection with Dalhousie College. At first nothing more than a short preparatory course, during the summer months, was aimed at. The venture met with success, and in 1870 it was decided to establish a full course of study and to confer degrees.

Before considering the Medical Act of 1872, mention may be made of some minor events which have resulted in good. The Nova Scotia branch of the British Medical Association, formed in 1887, which meets at Halifax during the winter months, and the Maritime Medical Association, formed in 1891, which holds its annual meeting alternately in the three capitals of the Maritime Provinces, have greatly promoted harmony and good feeling, as well as mutual improvement. The *Maritime Medical News*, founded in 1888, has been of material benefit to the various associations by preserving in an accessible form a record of their proceedings, and of their more valuable contributions.

The medical legislation in 1872 is of so much importance that I trust you will pardon me for giving an account of various steps leading to it. By medical legislation I mean, of course, enactments designed to regulate the study and practice of medicine, it being generally conceded that the state has full power in this respect.

The first step was taken while the military element in the profession predominated, and was perhaps suggested by the Medical Acts of Upper and Lower Canada. The Medical Act of 1828 is very brief, and is entitled, "An Act to Exclude Ignorant and Unskilful Persons from the Practice of Physic and Surgery." Its substance is as follows: No person shall demand or recover any fee or award for medical or surgical aid unless he has a diploma from some college legally author-

ized to grant the same, or of having been examined in respect to his professional capacity by judges to be appointed by the Governor-in-Council.

Next came the Act of 1856, promoted by the Medical Society of Nova Scotia. It provided for the registration of qualilfications in the office of the Provincial Secretary. In addition to being unable to recover fees for services, unregistered persons were prohibited from holding provincial medical appointments, and were also liable to a fine of £5 for practising.

The Act of 1872 conferred the privilege of self-government, as its provisions secure to representatives of the profession full control of all matters relating to medical education, registration and discipline.

The profession as a whole is not incorporated in Nova Scotia, as it is in Ontario. The Act makes provision for a body corporate, called the "Provincial Medical Board," consisting of thirteen qualified medical practitioners, of not less than seven years' standing—seven to be appointed by the Governor-in-Council for life, and six to be elected triennially by the Medical Society of Nova Scotia. No other provision is made for collegiate representation, and there is no annual tax as in other provinces, the revenue being obtained wholly from examination and registration fees.

Until quite recently the requirements for registration differed in one important respect from those in other provinces, inasmuch as submission to a professional examination was not required from holders of diplomas from reputable schools, obtained after a sufficient course of study. Instead of examination the board insisted upon a rigid compliance with all its regulations relating to the preliminary examinations, period of study, and course of study—tests which effectually excluded applicants from schools of doubtful repute. This policy enabled the board, while maintaining the status of the profession, to keep an "open door" for licentiates from other provinces—a courtesy which so far has met with no reciprocal recognition. At the same time honest men from schools of good repute were spared "vexatious penalties of mind and body."

The principle of state examination was adopted a few years ago, not through conviction of its merits or necessity as a test of professional fitness, but from a desire to co-operate with other provinces in a general scheme of reciprocity. For the past three years an examination in the practical subjects has been demanded from all applicants for license, and the day is probably not far distant when the policy of the board, in this

respect, will be adopted by other provinces, as it is now very generally recognized that medical boards and councils have not the requisite equipment, and can scarcely provide competent and independent examiners, to conduct examinations in the scientific subjects on the lines of the more recent methods of instruction.

The Act of 1872 proved an important factor in causing a diversion of students from American to Canadian schools.

The ever-increasing proportion of Canadian graduates added yearly to the Medical Register is a marked feature of this period, and is worthy of special notice. An analysis of the Medical Register of 1875—thirty years ago—shows that of the whole number of practitioners, 78 per cent. were American graduates, 14 per cent. were British graduates, 2 per cent. were Canadian graduates, and 6 per cent. were Nova Scotia licentiates. A similar analysis of the Register of 1904-5 gives widely different results. Of the whole number, 53 per cent. were Canadian, 44 per cent. were American, and 3 per cent. were British graduates. The change in favor of Canadian schools is still more strikingly illustrated by an analysis of the additions to the Register from 1895 to 1904. Of the number added, 85.5 per cent. were Canadian, 14.2 per cent. were American, and 0.3 per cent. were British graduates. During the year 1904-5 the additions to the Register were exclusively Canadian graduates.

The predominance of the American graduates, numerically, has come to an end, but their influence, always exerted for good, will be felt for years to come; and it is pleasing to observe that the many evils which resulted from a lowering of the standard of medical education in the United States did not sensibly affect the status of the profession in Nova Scotia. This has been due in some measure to our geographical isolation, but chiefly to the circumstance that, from the earliest period down to the present time, the students from this province who went to the United States to obtain a qualification, have almost invariably selected the best schools in Boston, New York and Philadelphia.

The burden of maintaining and improving the status of our guild in this province, and throughout our great Dominion, is now fairly placed on the shoulders of Canadian graduates.

SMALLPOX AND ITS TREATMENT.*

By A. LEITCH, M.D., St. Thomas.

I shall offer no apology for this paper, but will at once proceed with the subject under consideration. I may say that I have attended smallpox on several occasions, beginning with the severe epidemic in St. Catharines in 1876, and have treated ninety-two cases, with two deaths, nearly half of the number being negroes, or partly of that nationality, and the two deaths were colored: one over eighty years of age and bedridden for six months previous to the attack, the other at the time of contracting the disease suffering from delirium tremens, so that I do not feel myself responsible for their non-recovery. The stages of smallpox are, as you are all aware, incubation, primary fever, eruption, secondary fever, and desquamation. The period of incubation lasts in genuine smallpox about twelve days, in varioloid and discrete cases a somewhat shorter period, and may in some cases be shortened by the influence of vaccination, more particularly should it take place in the first or second days of incubation. I have seen the disease cut short in that manner, aborting at the macular and papular stage and modified in the vesicular stage. The symptoms at first being languor, headache, vomiting, severe pain in the back, moderately rapid pulse and temperature, the temperature not being so high as in scarlet fever, and falling upon the appearance of the rash, distinguishing it from scarlet fever, as in the latter the temperature remains higher, even in many cases raises after the rash appears. On the third day you have the rash, appearing at first macular, small and reddish in color, first appearing upon the face, then on the wrists, neck, arms, trunk and lower limbs, most frequently first appearing upon the forehead and lips and then upon the wrists. The rash is more easily seen upon the throat and roof of mouth, and may even appear on throat before it appears upon face. It now changes to the papulæ form and can easily be felt under the skin like small shot and should at all times confirm the diagnosis from either scarlet fever, measles, or varicella. The throat rash is now very marked, more especially upon the soft palate, and is distinct from the red rash of scarlet fever. Now they become vesicles, and may in discrete cases be mistaken for varicella, but the cells are multiple

* Read at meeting of Ontario Medical Association.

and not single as in varicella, and a careful examination and puncture would prevent mistaken diagnosis. The vesicles now become pustular and then umbilicated; the disease has now advanced about nine days since eruption began. The pustules now flatten and scab, which stage is followed by desquamation in from five to nine days, which process is generally complete in about six or seven days. In diagnosis you have, as a rule, only to consider scarlet fever, measles and varicella. Only confluent or semi-confluent variety should be mistaken for scarlet fever or measles, and the discrete or varioloid for varicella.

From scarlet fever you have more pain in the back, and the fall in the temperature when the rash appears; also the deeper red of the rash, not crimson, as in scarlet fever, the macular and papular form of the rash. The marking upon the soft palate, and in second day the defined strawberry tongue of scarlet fever, and it is in this stage that the error in diagnosis should be avoided.

From measles the peculiar rash and absence of coryza and cough should confirm your diagnosis.

From varicella in the confluent and semi-confluent variety a mistake should never be made, as the extensive rash and its history and peculiar macular and papular form should be ample for a differential diagnosis; but in discrete or varioloid a mistake might occur unless care be exercised in history of case and a careful examination of the vesicles, for it is at this stage that errors make their appearance. The careful examination of the vesicles, whether single or multiple celled, would confirm diagnosis. Also in varicella your crop of vesicles appear as such, and do not appear as maculæ and papulæ before becoming vesicles, and are as a rule pustular immediately upon coming on, and are seldom umbilicated.

As to Cuban itch, I never saw a case, and have noticed that all such cases proved to be smallpox, and have caused an immense amount of trouble by the erroneous diagnosis.

Treatment.—From the first support your patient by a liberal diet, keeping the secretions active, remembering that the skin is unable to perform its part, therefore the bowels and kidney must be active. I at once, after caring for the secretions, begin with calcium sulphide, ¼ gr. every three hours; also ferri et quin citrates 5 grs. every four or six hours; and by so doing have been enabled to secure perfect success with my seventeen patients treated under that manner. Should eyes become affected, look sharply after them; also examine the lungs for

bronchitis and pneumonia, remembering the tendency to such trouble in all exanthemata. I also use a solution of flexible collodion upon the fact and exposed parts; also a red blind upon the windows.

I may say that previous to the use of calcium sulphide I had good success in saving the lives of my patients, but never succeeded in preventing pitting until I employed it in 1903.

I watched its action carefully in 1903 and 1904, and found that it cut short the disease, modified the eruption by preventing the formation of pus in the vesicles, and thereby prevented pitting, which I contend is the greatest blessing of the present day in the treatment of smallpox.

I first used it in the epidemic of 1903, which was a severe type. Coming from Cleveland to Galt and from Galt to St. Thomas I had eleven patients: one confluent, four semi-confluent, and the others discrete, three being badly marked all over the face, head and body, yet not a single mark remains upon any of the eleven treated by me. In 1904 I treated six, all discrete cases, with the same results—no marking. We all know the effect of the remedy in boils and carbuncles, and here it seems to be a specific.

I may say that in 1904 a mother and daughter, nine years old, were vaccinated by the Medical Health Officer, and did not take. Two weeks subsequently I vaccinated them with perfect success. You will notice they were immune to smallpox, yet not to vaccination, although exposed at all times for over two weeks. Also this woman and another girl who had a good attack of smallpox, were both pregnant four and five months, yet carried to full term and had healthy, unmarked children.

AN INSTANCE OF STAPHYLOCOCCIC INFECTION OF THE TONSIL SIMULATING A CHANCRE.

By DOUGLASS W. MONTGOMERY, M.D.
Professor of Diseases of the Skin, University of California.

In the diagnosis of chancre in its usual situations, the danger lies in mistaking lesions that are not chancre for chancre. On the contrary, when chancre occurs in an unusual situation the danger lies in considering it to be some other affection. The following is an instance, however, where the lesion looked so strikingly like a chancre that, although it occurred in a very unusual situation, all the men who saw it were impressed with its resemblance to the primary lesion of syphilis.

The patient, the subject of this paper, first consulted me October 18th, 1893, on account of a seborrheic eczema in the left scrotal thigh fold, which, of course, has nothing to do with the present question. He next came to see me, April 1st, 1901, under the following circumstances:

A few days before, he had started on a trip in the southern part of the State. On March 30th, on arising in the Pullman in the morning, he glanced at the reflection of his throat in the mirror and was horrified to see a large yellow lesion on the left tonsil. He went directly to Los Angeles, and saw two of my friends there, men who are used to seeing syphilis. As the patient expressed it, the best thing they "handed out to him" was syphilis, and they freely told him they thought the affection either an epithelioma or syphilitic ulceration. They proposed to cut or burn it out. He said he would return to San Francisco before having anything done. I saw him on the morning of April 1st, 1901, and it had then the appearance of a chancre.

There was a circular crateriform ulcer, or what appeared to be an ulcer, the size of a nickel on the left tonsil. The floor of this ulcer had a yellow covering, and its edges were rounded and raised. The left anterior pillar of the fauces was bulged forward, rounded and smooth, and of a deep red color. There was a small extension of the ulcer downwards, but its general outline was circular. On looking into the mouth, the observer looked right straight down on the floor of the ulcer, and it gave the impression of being a chancre. On palpitating the sore, it was not found to be very hard, only fairly firm. The ulcer was not painful, but the patient expectorated a good deal and it evidently irritated him. There was one enlarged lym-

* Read before the German Medical Society, San Francisco, April 4th, 1905.

phatic nodule behind the left ramus of the jaw, which was smooth and firm, but not hard. This lymphatic nodule was tender, and there was also some pain and discomfort on the left side of the neck from the ear downwards, which had been present for several days. The left epitrochlear lymphatic nodule was enlarged, but soft. Neither tubercle nor Loffler bacilli were found in either smears or cultures made both by myself and by Dr. Charlotte B. Spring. The only micro-organisms found were staphylococci. There was no fever, and he had good general health.

Such history as was given was corroborative of the view that the lesion was a chancre, or at least syphilitic. The patient had been exposed with two Babylonish women shortly before, and he said that he had been treated in New York in the first part of January by a doctor who was not cleanly in regard to his instruments. Of course, the New York incident was too far removed to permit of thinking the lesion a chancre, but there remained the bare possibility that it might be one of the deep ulcerative processes that sometimes occur in the throat in secondary syphilis. Against this was the fact that there were no concomitant symptoms. All possibilities, however, have to be weighed in the consideration of a doubtful case.

The patient that same day on which he came to me saw two other physicians, both well versed in this particular class of disease. Each of them, on independently examining it, thought that the lesion was a chancre. We all three met that afternoon and concluded, that although the affection looked so characteristic, that it would be better for the patient to await the appearance of other manifestations before definitely determining on a diagnosis of syphilis, and in the meantime we prescribed a mouth wash of peroxide of hydrogen, and internally we ordered tincture of chloride of iron to be given in thirty-drop doses every three hours.

By April 5th, the fifth day under our observation, the lesion had dwindled to a very small surface, and the enlarged lymphatic nodule at the left angle of the jaw was hardly perceptible. By April 6th the lesion had entirely healed.

I did not see the patient again professionally for about four years. On March 3rd, 1905, he came to me with an affection in the very same situation as before, and it was then that I got an insight into the cause of the resemblance of the previous lesion to a chancre. It was explained by the peculiar shape of the affected crypt of the tonsil, which was deep and funnel-shaped and had a bulged-out rounded rim. In this funnel-shaped cavity there was a dirty, grey mass that simu-

lated exactly the necrotic floor of a chancre, while the raised rim corresponded to the induration surrounding such a sore. The lymphatic nodule behind the left angle of the jaw was a little enlarged, as it had been before. As I concluded it was an attack similar to the one the patient had suffered from four years before, and therefore did not belong to my specialty, I turned the case over to Dr. Pischel.

A couple of days afterward it showed almost the identical picture it had exhibited four years before, so there was no doubt of the identity of the two attacks.

Yellow masses taken from this crypt were found on microscopical examination not to be leptothrix masses, which they resembled, but almost a pure culture of micrococci with a few bacilli, and with very few epithelial cells and an occasional pus cell. The cultures showed only staphylococci. It was therefore concluded that the lesion was a staphylococcic infection of a particularly deep, wide-mouthed tonsillar crypt.

In this view of the case, the pathology of the affection was strikingly similar to that of an acne following comedo. This deep tonsillar crypt presumably became filled with one of those cheesy masses so frequently seen in the tonsil, then the cheesy mass became infected with staphylococci, just as the sebaceous plug in a sebaceous gland in acne does. In this way the funnel-shaped crypt, filled with a pure culture of staphylococci, could be compared with a cornucopia filled with fruits and flowers, although the flora in this case were not so artistic looking as generally pictured, but constituted a dirty, greenish-grey mass. Although clinically the lesion gave the appearance of an ulcer with high rolled edges and a dirty floor, I do not believe there was any ulceration at any time. Probably the kind of infection was not the determining factor in producing the clinical picture, but rather the shape of the follicle. Other infections, such as streptococci or leptothrix, occurring in the same follicle would possibly, if they had produced a certain amount of reaction, have given rise to the same appearances.

Fournier calls these cases "lacunar or cavernous amygdalitis," and draws attention to how easily they may be mistaken for a chancre or for an ulcerating gumma.[1] Dr. Mendel, whom Fournier quotes as having written an interesting memoir on this kind of tonsillitis, calls the affection "ulcerating chancriform amygdalitis," signifying by the name its close mimicry of chancre.

The first good description of chancre of the tonsil was given by Mauriac in 1884. Previous to that both Diday and Rollet had admitted that chancre of the tonsil could occur, but the

lesion in this situation was considered so rare that physicians were afraid to trust themselves in making a diagnosis. In this country, R. W. Taylor called the attention of the profession to this location of the primary lesion.[2]

In reviewing what has been written of the diagnosis of chancre of the tonsil, we find the following possibilities of error. The lesion is most frequently taken for a simple tonsillitis, or la grippe, or a staphylococcic or a streptococcic sore throat. The next most frequent error is to suppose it to be diphtheria. Krefting, of Christiana, has reported thirty-six cases of chancre of the tonsil, and says that many of the patients were first sent to the diphtheria ward.[3]

Legendre has reported a case where the lesion resembled an angina diphtheritica, and Brocq mentions an instance where the chancre was diagnosed as an angina gangrenosa.[4] Chancre of the tonsil has also been mistaken for a mucous patch, or for an epithelioma.

P. Merklen has, for instance, reported a case where a chancre of the tonsil in a woman, sixty-four years of age, simulated so closely an epithelioma that several observers so diagnosed it. Subsequently it was thought to be a tertiary lesion and it was only the appearance of the secondaries that led to a correct diagnosis.[5]

Fournier also mentions a very intresting case where the diagnosis was difficult, and where the lesion was at first considered to be an epithelioma. There were pains in the ears, cephalalgia, and adenopathy "en pleiade."[6]

As we have above stated, the present case reversed the usual errors, and was a comparatively insignificant affection that bore a striking resemblance to a chancre and was thought by well-trained men to be either a chancre or an epithelioma, a mistake that was not the result of ignorance, as the clinical type here represented is very rarely seen, and no one on first seeing it could be blamed for not recognizing its true character.

That the patient was not definitely put on antisyphilitic treatment when he first consulted us was the fortunate outcome of conservatism in not wishing to decide the case on the evidence of the primary lesion alone.

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THE THERAPEUTICS OF ASPIRIN.*

By J. BURNET, M.A., M.B., M.R.C.P., (Edin.)

Aspirin is the acetic ester of salicylic acid. It occurs as fine white, acicular crystals, possessing a distinctly acid odor, and an agreeable acid taste. Dilute alkaline solutions, readily dissolve it, splitting it up into its component parts. It is only slightly soluble in an acid medium. It differs chiefly from other salicyl compounds in being much less irritating to the gastric mucous membrane. It tends to increase the heart's activity, and does not produce tinnitus aurium. Its presence in the urine can be detected shortly after its administration. It is best given in a glass of lemon water, and must on no account be prescribed along with alkalies, nor in the form of tablets. The average single adult dose is from 10 to 15 grains.

It is in rheumatism and rheumatic affections that aspirin is more especially to be employed. I have given it in over 200 cases. To get the best results it should be given in full doses, and its administration should not be discontinued too early. It is useful in lumbago, and in pleurodynia. In cases of chorea I have had remarkably good results from the use of aspirin. In fact, I have yet to meet with a case of chorea in which aspirin, given in suitable doses, failed to bring about alleviation of the condition. It should, however, be given in doses of from 10 to 15 grains. Children take it well, and it never produces toxic symptoms. In acute rheumatism of childhood I have likewise found aspirin of value. It should be given in 5 to 10 grain doses every three or four hours. It is also of service in many cases of tonsilitis of rheumatic origin occurring in children.

In rheumatic eye affections, such as iritis, it will be found invaluable. In the treatment of the hectic fever of tuberculosis small doses of aspirin possess the power of reducing the temperature. As an analgesic it can be recommended, not only in many cases of neuralgia but especially in sciatica, neuritis, and even in malignant conditions. In certain forms of influenza aspirin proves extremely useful. In cases of glycosuria, as first pointed out by Williamson, of Manchester, aspirin alone is able to reduce the amount of sugar excretion.

In fact, in my opinion, aspirin entirely replaces all other salicyl compounds, as it is a more powerful analgesic and antithermic agent than any of the others.—*Medical Press and Circular.*

[In some cases aspirin has a distinctly depressent effect and its administration should be carefully watched.—Ed.]

* Abstract of paper read before the Therapeutical Society on March 28th, 1900.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

Visceral Hypoplasia and Cancer.

It has many times been noted that patients suffering from cancer have the visceral organs incompletely developed. Cattin (*Jour Med. et Chir. Pratiques*) has collected all the data possible on the subject, and believes that the statement is generally true, no matter what organ is primarily affected. The uterus in many of the cases examined was undoubtedly hypoplastic, sometimes even infantile in type. Some have considered that the various viscera showed only atrophy, and not hypoplasia, but this is disproved in the case of the kidney, where fetal lobulation is often well marked. Cattin therefore concludes that there is an intimate connection between visceral hypoplasia and malignant disease.

F. A. C.

Opsonic Power in Tuberculosis.

Urwick (*Br. M. J.*) explains clearly the term "opsonin," first used by Wright, and derived from a Greek word, meaning "to prepare food for." Opsonins are substances contained in the serum or plasma of blood, which possess the power of so influencing bacteria that they fall an easy prey to the leucocytes. This peculiar property is found in the blood of all persons, but differs in degree, and may be measured for, say, tubercle bacilli by a simple experiment. A small quantity of the serum to be tested is mixed with equal quantities of an emulsion of tubercle bacilli and of blood corpuscles washed in 5 per cent. solution of sodium nitrate in normal saline. Incubate the mixture for twenty minutes. Films are then made and stained for the bacilli. The average number of bacteria ingested by each polynuclear leucocyte is calculated, and in this way the opsonic power of the serum estimated.

In 54 cases of various types of tuberculosis Urwick has studied the opsonic power of the serum, and has obtained figures varying from 0.3 to 2.6, normal serum being taken as unity. These numbers are so widely divergent that we

can at present come to no satisfactory conclusions, as far as clinicians are concerned, but further investigation along these lines is full of promise. F. A. C.

Cholelithiasis.

Bain (*Br. Med. Jour.*), from a number of experiments on animals in whom he produced gall-stones, comes to the following conclusions:

1. That gall-stones introduced into a normal gall-bladder become dissolved within a comparatively short space of time, in about eight or nine weeks.

2. That when a mild degree of cholecystitis is set up gall-stones inserted into the gall-bladder do not disappear, although there is always a reduction in weight.

3. That ichthoform, cholelysin, olive oil, and calomel do not appear to have any effect in resolving calculi introduced into a gall-bladder the mucous membrane of which is inflamed.

4. That during a course of the Harrogate old sulphur water gall-stones become disintegrated in cases of cholecystitis experimentally induced.

5. That in the treatment of artificially produced cholelithiasis a mixture of urotropin and iridin has a pronounced effect in causing dissolution of the calculi.

6. That in regard to the action of barium chloride further experiments are necessary to determine its role in experimentally-produced cholelithiasis.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. McILWRAITH, FRED. FENTON AND HELEN MacMURCHY.

Rapid Dilatation of the Cervical Canal and the Choice of Methods for the General Practitioner.

Stockel (*Berl. Klin. Woch.*, March 13th) discusses the methods of rapid dilatation of the uterus used in modern times. Rapid dilatation is now employed much more frequently than formerly. It was then resorted to only when there were serious dangers to life. The methods have been so much improved that it may now be used without difficulty or danger, and nature may thus be assisted much more frequently. Methods of dilatation fall naturally into two groups:

dilatation without cutting of the tissues, and dilatation with the use of the knife on the cervix. In the first category belong Bossi's method, and dilatation by inflated rubber bags. To the second belong the radiating incisions of Duhrssen and his vaginal Cesarean section. Of the radiating incisions it may be said that they result in severe hemorrhages, dangerous to life and difficult to control. Vaginal Cesarean section is neither difficult nor dangerous, but the indications for it are few. Bossi's dilator is a metallic instrument with four arms, placed together when the instrument is introduced, and separated gradually by a mechanical device, the amount of dilatation accomplished being indicated by a scale. The instrument is not as yet fully adopted by the general practitioner, and has not as yet been thoroughly studied by gynecologists. Among those who have employed it there are great differences of opinion as to its value and the indications for its use. Leopold has reported very favorably upon its use in eighty cases. Ehrlich recommends using it only where there is danger to the life of mother or child. According to him eclampsia is the most important indication for its employment. Others are tetanus uteri, sepsis during labor, contracted pelvis, perhaps placenta previa. Dilatation is absolutely necessary for the application of the forceps, and version does not give as good results as forceps, the life of the child being often sacrificed, and ruptures more frequent. This instrument rarely causes rupture of the cervix. Hence it may be used preparatory to forceps. V. Bardeleben has had results of quite an opposite nature. He states that the uterine contractions do not succeed the dilatation in proportion to the amount of opening obtained; that cercival tears are easily produced and are frequent; that the method is not favorable to the child; that following its use most women suffer from metritis and other inflammations. The author has himself seen tears result, and severe hemorrhages produced. He thinks that more observations should be made by gynecologists before it comes into general use.—*Amer. Jour. of Obstetrics.*

Acute Cholecystitis in the Puerperium.

Dr. H. N. Vineberg (*N. Y. Med. Record*) reports the following cases: One patient was 31 years old, had been delivered nine days previously of her fifth child. The uterus and adnexa were normal, but a short, jerky respiration attracted attention to the gall-bladder region, where great tenderness was mapped out. Although the diagnosis of puerperal sepsis had been

made, Dr. Vineberg decided it to be a case of cholecystitis, and operation (cholecystotomy), done the same night, confirmed the diagnosis. Another patient was seen ten days after delivery and subjected to the same treatment. Both patients recovered.

An Investigation into the Causation of Puerperal Infections.—By Drs. A. G. R. Foulerton and V. Bonney *(The Lancet)*.

The details of these extensive studies should be read only in the original work compiled by the authors. The bacteriological findings in fifty-four cases establish the predominating importance of streptococci in puerperal infections. The next micro-organism in order of importance was the micrococcus pneumoniæ.

The authors conclude that the old classification of cases of puerperal fever into sapremic, septicemic, and pyemic has but little value. In the absence of a definite bacteriological diagnosis it will be safest to deal with every case of puerperal fever in which the temperature rises above 102 deg. F. as if it were a case of streptococcic infection.

A compound or polyvalent serum has been prepared by the authors by means of which they hope to secure a considerable reduction in the mortality of puerperal fever.

They regard the use of the curette in puerperal fever as mischievous; although they approve of digital exploration of the uterus, the removal in this way of any retained fragments and subsequent douching with an antiseptic solution. Preventive vaginal douching preceding labor they strongly condemn, as such procedure fails to dislodge bacteria in the cervix.

The use of the curette should be absolutely discarded in the treatment of puerperal uterine infection. "In the case of either a streptococcic or pneumococcic infection of the uterus, with or without secondary infection by other bacteria, this procedure would seem on the one hand to be incapable of doing any good, and on the other hand, might be productive of most serious result by infecting the hitherto intact deeper tissues of the uterine wall."—*The Post-Graduate.*

The Treatment of Menorrhagia and Hemoptysis by Inhalation of Nitrite of Amyl.

In the *Scottish Medical and Surgical Journal* for May, 1905, Colman states that in his study of this subject, Dr. Francis Hare, of Brisbane, did not feel justified in deliber-

ately trying the effect of nitrite of amyl on the menstrual flow, but that accidentally, in the course of treating a case of angina pectoris, he found that inhalation of nitrite of amyl checked menstruation completely in this patient on several occasions.

This point attracted the attention of the writer, as at that time he had a patient suffering from severe menorrhagia, which he had found very difficult to relieve. It seemed to him that a drug which stopped normal menstruation would probably check the excess at least in his patient's case.

From the details of the case and the results of the experiment given by the author in his paper, it would seem sufficient to state that the drug was most successful. By means of it the loss of blood was kept well within normal limits after other methods had failed, and the patient's general condition very much improved.

Amyl nitrite must be looked upon as a distinct help in the treatment of inaccessible hemorrhage. Its utility in hemoptysis has been proved by Hare in a sufficient number of cases to warrant a much more extended use than would appear to be the case at present. In menorrhagia ,in the one case now reported, the successful use was undoubted, and further trial in similar cases will, in the author's opinion, meet the same success.

There can be little doubt that the sudden lowering of the blood-pressure is the main factor in the checking of hemorrhage by inhalation of nitrite of amyl.

This sudden lowering of blood-pressure allows clotting to take place in the bleeding area, be it ulcerated lung surface or engorged endometrium. The blood-pressure rises again, but gradually, and so the clots formed are not displaced. In short, the action of nitrite of amyl is a very close imitation of nature's method of checking very severe hemorrhage, viz., syncope, clotting in the ruptured vessels, gradual rise of blood-pressure, and return of consciousness, the rise of pressure being not rapid enough to expel the clots.

Lastly, the inhalation of nitrite of amyl seems to have no bad effects on patients, the headache usually complained of being very transient.—*Therap. Gazette.*

Fatal Precipitate Labour.

H. E. Rayner, F.R.C.S., and W. L. Stuart, M.D. (*Lancet*, June 17th, p. 1644.)

A primipara, twenty-six years of age, who was expecting her confinement, was in good health and spirits at 2 p.m.,

when her husband left for his work. On his returning at 4.30 he found her seated in the water-closet and inanimate. She was carried to another room and restorative measures were tried without success. The whole of the uterine contents had been ejected into the pan of the closet, the child's head having completely passed through the lower opening and the body and shoulders remaining above. The pan had to be smashed before the body could be liberated. The difficulty of withdrawal was probably due to edema and congestion, the result of the dependent position. The child was a normal female of full size. There had been apparently much hemorrhage, but the amount could not be determined with accuracy. The upper segment of the uterus was intact and fairly well contracted, the lower segment and cervix showed bilateral rupture through the whole thickness of the muscular wall. There were several longitudinal fissures in the vagina involving the mucous membrane and part of the muscle wall. The deeper tissues of the perineum were lacerated, but the superficial were intact. Death presumably was due to shock from the ruptured uterus, the sudden diminution of intra-abdominal pressure, and the hemorrhage.

The majority of books give the causes of precipitate labor as increased propulsive force and diminished resistance. But the auxiliary propulsive force produced by straining at stool is, after all, only physiological, and in this case, the woman being a primipara, the second cause was certainly not present. From a medico-legal point of view this case also is of interest. If it had not been fatal to the mother it might have been argued that the impossibility of withdrawing the child's head indicated that some means (such as interference on the part of the mother) additional to the forces of expulsion and gravity had been used to get it into the extraordinary position in which it was found.—*Med. Review.*

Editorials.

ASYLUM APPOINTMENTS.

Considerable interest has been taken in certain appointments recently made in the public service of Ontario. We understand the Government had a surplus of candidates for the superintendency of the Toronto Asylum for Insane, but unfortunately all had been party men in the past. Under the circumstances it was considered advisable to appoint a physician not connected with any political party. Dr. C. K. Clarke, who has paid considerable attention to the subject of insanity, was therefore appointed. An Independent newspaper of Toronto looks on the appointment with considerable favor, and tells us that "in making a non-political appointment to the Toronto Asylum the Whitney Government commits no error," and adds that "party service alone would be no qualification in the director of an asylum." And again, "so many mental diseases are either curable or may be mitigated by proper treatment, that whenever possible the knowledge of some one who has given special attention to the subject should be evoked."

Without doubt, both the Government and the Independent journal have shown in this matter considerable ingenuity and astuteness. Some of our friends, however, consider it would be quite as well to use plain English. The appointment of Dr. Clarke is not a new one. He is simply transferred from one asylum to another without the slightest change in his rank, chiefly, if not altogether, to meet the requirements of certain political exigencies.

Without discussion of the political aspect of the matter, we have every reason to believe that the removal of Dr. Clarke from Kingston to Toronto will give general satisfaction, because it is believed that he is well qualified to be the head of any asylum for insane in the world. He was born in 1857, did asylum work during all of his student days, graduated in 1878, and has been engaged at asylum work ever since.

We learn from the Toronto Independent journal that Dr.

Edward Ryan, of Kingston, who has been appointed Medical Superintendent to the Kingston Asylum in the place of Dr. Clarke, is President of the Kingston Conservative Association, and unsuccessfully contested Kingston in the Conservative interests in 1902. It is not stated whether or not this is a non-political appointment. Dr. Ryan graduated in Arts in 1886, and in Medicine in 1889, from Queen's University. He has been recognized for years as one of Kingston's most able and prominent physicians on account of his well-known energy, industry and ability. We believe that he will soon become an excellent asylum superintendent.

Dr. Joseph John Williams, of Lisle, Ont., has been appointed Superintendent of the Asylum for Epileptics at Woodstock. He graduated from the University of Toronto in 1893, and many of the professors of that institution certified that he is possessed of energy, tact and ability in a high degree. After graduating, he practiced for a time in Gorrie, and then removed to Lisle, West Simcoe, the constituency of Mr. J. F. Duff, M.P.P. It may be mentioned, incidentally, that Dr. Williams has been one of the best supporters of the Conservative party in his part of the province during the last three or four elections. No one has stated, so far as we know, that this is a non-political appointment.

Many think that Dr. Mitchell, formerly of Enniskillen, should have received this appointment. He was officially informed by the late Reform Government that he would be appointed, and on the strength of such information travelled in the older countries, at his own expense, and studied the methods in vogue in similar institutions with a view to properly fitting himself for the position. His appointment, however, was not officially confirmed. In the meantime, "there arose up a new king over Egypt which knew not Joseph."

The Whitney Government practically took no notice of Dr. Mitchell's claims for the position. It happened that Dr. Mitchell had engaged in a dangerous game of politics, and must accept what may be called the fortunes of war.

Dr. Charles O. Hickey has been appointed Superintendent of the Cobourg Asylum for Insane. We are told by the Toronto Independent Journal that he is a well known Conservative and represented Dundas in the House of Commons from '82 to '91. He was appointed Superintendent of the Morrisburg Canal in the early 90's, but upon the change of government at Ottawa, in 1896, was removed from office. He then resumed his medical practice at Morrisburg. Dr. Hickey graduated, B.A., from Victoria University in '63, and, M.D., from McGill University in '66. We are not told that he has ever given special attention to the study of the management of insane asylums.

It seems to be almost forgotten that there is such a thing as an asylum service, composed of superintendents with staffs of able and conscientious assistants, who have been paying particular attention to this subject for many years. Among them are such men as Dr. Beemer, of the Hamilton Asylum; Dr. Forster, of the Mimico Asylum; Dr. Ross, of the Toronto Asylum; Dr. Barber, Kingston Asylum, and Dr. Mitchell, to whom we have before referred. Why are these men ignored? Why is a man who graduated thirty-nine years ago supposed to be better qualified for the position as superintendent of an asylum than some of those men whose names we have mentioned? Is it because Dr. Hickey was a member of Parliament for years, or because he was a superintendent of a canal for years that he is supposed to be qualified for this position? Is this a non-political appointment?

Upon the whole, we consider the recent appointments, whether they be called political or not, are excellent; but we regret that good men in the service have been overlooked and humiliated. Even one promotion would have given some encouragement to a worthy staff. If, however, we are mistaken, and the assistants are not good and faithful servants, they should be dismissed. We want an efficient and well-trained asylum service.

THE MONTREAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

The meeting of the British Medical Association in Montreal, in 1897, to which we made brief reference in our last issue, was in some respects the most memorable medical gathering this continent has known. It is unnecessary to say now that the meeting was in every way a grand success. It was generally considered at that time that the success of the meeting in all respects exceeded the most sanguine expectations of all physicians interested, both in Great Britain and Canada.

It is generally conceded that no city in Canada surpasses Montreal in generous hospitality extended to visiting physicians at any and all times. On this particular occasion she exceeded all of her former efforts. Her physicians united in a continuous and untiring effort to keep the enormous machinery of the meeting in good running order, and to royally entertain the guests, both British and Canadian.

We remarked at the time that the meeting of the Association outside of Great Britain was a remarkable event, and the success of the Montreal meeting was likely to have a marked effect on the future history of this great medical organization. In this connection we reproduce a quotation from the London *Lancet*:

"It seems to us that with this meeting at Montreal, memorable as it will be in many ways, the British Medical Association enters upon a new career. Those of its members who are attending it from England will realize that in Greater Britain the medical profession is animated by the same spirit as at home; that with the common participation of membership to the same body there must be equally the common desire towards the same ends, the furtherance of the art and science of medicine for the sake of humanity, the promotion of fellowship between those who pursue the same calling. The Association has long ceased to be 'provincial,' it is now more than insular, and with its world-wide extension will come the growth of new ideas, the emancipation from the fetters of narrow policies, and the working together of the medical pro-

fession of the British Empire to attain all that is most worthy in the promotion of professional aims and to maintain a high standard of professional honor."

We in Toronto consider that our city is highly honored in being chosen as the next place of meeting, but we accept all the responsibilities therewith with a certain amount of diffidence, to some extent accentuated by the success of the Montreal meeting. However, we think there is a general feeling that the profession of Toronto will be united in the matter, and will receive the unanimous support of the physicians of all Canada, which means a very large part of what is known in recent years as Greater Britain. How pleased we would be if our beloved Lister should come to us again, but we fear that such a journey will not be considered advisable for him next year.

Since this article was written we have seen the following in the *Montreal Medical Journal*: "The British Medical Association will meet in Toronto in 1906. There are in Montreal many persons yet living who acquired some experience during the meeting which was held here in 1897, and the Committee on Arrangements might learn of us. We make this suggestion with proper humility, as knowing our place: we lift up our eyes to that great city."

We gladly accept the suggestion, although we do not understand whether the last paragraph is intended to be facetious or cynical. We think it might well have been deleted.

CANADIAN MEDICAL ASSOCIATION.

We are much pleased to learn from the General Secretary, Dr. Geo. Elliott, of Toronto, and others, that the thirty-seventh annual meeting of the Canadian Medical Association, which was held in Halifax, August 22nd to 25th, was in all respects remarkably successful. Although we do not know the exact numbers, we understand that the attendance was about equal to that of the meeting held last year in Vancouver, which was

the third largest meeting up to that time in the history of the Association.

The Nova Scotia Committee of Arrangements, working under the united efforts of the profession of Halifax and the Nova Scotia Medical Society, did admirable work. The various sessions were held in the new building of the Institution for the Blind, which was well planned for such a meeting, and was very handsomely decorated. After the usual session on the morning of August 22nd, the meeting of the Dominion Protective Association was held, and after receiving the usual annual reports and discussing certain details in connection with the admirable work of the Association, the former officers were re-elected. The literary programme, which was carried out along the lines intimated in our last issue, was very satisfactory.

We are told by some of our Toronto confreres that it will be an exceedingly difficult matter for this city next year to equal the profession in Halifax in the unbounded hospitality, which was extended to all visitors at the recent meeting.

Among the many entertainments given to the guests were a reception in the Provincial building by the President and members of the Nova Scotia Society; a large concert in the public gardens; four concerts in the Rowing Club and Armouries; a garden party at the residence of Senator McKeen, and a number of excursions in the beautiful harbor of Halifax, and one excursion to Chester. The Haligonians are, of course, celebrated for their hospitable methods, and on this occasion appeared to outdo themselves, if such a thing were possible.

On account of the British Medical Association meeting in Toronto in 1906, it was decided to hold the meeting of the Canadian Medical Association in Toronto concurrently with that of the other Society.

The following officers were elected—President: Dr. Alexander McPhedran, Toronto. General Secretary: Dr. Geo. Elliott, Toronto. Treasurer, Dr. H. B. Small, Ottawa. Vice-Presidents: Prince Edward Island, Dr. H. D. Johnson, Char-

lottetown; Nova Scotia, Dr. G. Carleton Jones, Halifax; New Brunswick, Dr. Emery, St. John; Quebec, Dr. H. S. Birkett, Montreal; Ontario, Dr. J. D. Courtney, Ottawa; Manitoba, Dr. H. P. Prowse, Winnipeg; North-West Territories, Dr. H. C. McKid, Calgary; British Columbia, Dr. R. E. McKechnie, Vancouver. Local Secretaries: Prince Edward Island, Dr. Simpson, Charlottetown; Nova Scotia, Dr. J. R. Corston, Halifax; New Brunswick, Dr. J. A. Scammell, St. John; Quebec, Dr. Ridley McKenzie, Montreal; Ontario, Dr. Harold Parsons, Toronto; Manitoba, Dr. J. R. Davidson, Winnipeg; North-West Territories, Dr. J. Hislop, Edmonton; British Columbia, Dr. W. H. Sutherland, Revelstoke. Executive Council: Dr. W. P. Caven, Toronto; Dr. A. A. McDonald, Toronto, and Dr. F. LeM. Grasett, Toronto.

Meeting of Asylum Superintendents.

A very important meeting was held in the Parliament Buildings, Toronto, September 20th, when the medical superintendents from the various asylums from Ontario, gathered in consultation with the Honorable W. J. Hanna, the Provincial Secretary, for the purpose of discussing the needs of the Provincial asylums. Sometime was occupied in discussing reforms in the management and equipment of asylums. During the session Dr. Campbell Meyers read a paper, in which he discussed the various means for the treatment of incipient insanity.

We congratulate Mr. Hanna and all concerned on the great success of this meeting. We consider it a happy inspiration which induced the Provincial Secretary to call together in this pleasant way the chiefs of this most important service. We shall make a more extended reference to the meeting in our next issue.

At the next meeting of the Mississippi Valley Medical Association, to be held at Indianapolis, Ind., October 10th, 11th, and 12th, the annual addresses will be delivered by Dr.

Arthur R. Edwards, of Chicago, and Dr. W. D. Haggard, of Nashville, Tenn. Dr. Edwards has chosen for the subject of his address, "Certain Phases of Uremia, Their Diagnosis and Treatment," and Dr. Haggard will discuss in his address, "The Present Status of Surgery of the Stomach." In addition to these addresses there will be the annual address of the President, Dr. Bransford Lewis, of St. Louis. A cordial invitation is extended to every physician in the valley to attend this meeting, for which a large number of interesting and valuable papers have been promised.

NEW HOSPITAL FOR TORONTO.

The trustees of the Toronto General Hospital will soon take decisive action on the question of a new hospital, but in the meantime they have wisely decided that the present building on Gerrard Street shall be, as far as it is possible, equipped in every respect equal to the best hospitals in other great cities. Some time ago the plumbing was all overhauled and largely replaced, and many other improvements carried out, and within the past few weeks, through the generosity of a few wealthy citizens, valuable appliances have been provided, all of which will help the patients and be the means under Providence of alleviating much suffering.

The wisdom of this renovation of the present building and improving its equipment is obvious when it is borne in mind that probably three or four years must elapse before the new hospital can be ready for use, and it would be unfair to the staff, as well as cruel to the patients, to refrain from making all needed improvements on the plea of waiting for the new building. The General Hospital is now splendidly equipped, and can, as it always did, give to its patients the benefits of the very latest discoveries and inventions for the "healing of the sick."

Consult and Advise.

When the time comes to take action regarding the erection of a new hospital, the present Board of Trustees, who have no preconceived plan to propose, will call in for consultation and advice representatives of the Provincial Government, the City Council, the University, and private donors to the hospital funds, and these representatives, all desirous of having

the very best of hospital buildings for this city, will probably call into existence a new hospital trustee board, in whom will be vested the property and the government of the greatly enlarged and improved institution to be erected in the city for the care of the sick. This new board will have grave and serious duties to assume, and will have heavy financial responsibilities to undertake. No definite estimates of the actual cost of a site and building, the latter thoroughly equipped, have as yet been made, but it will amount to a large sum, probably a million dollars or even more, and there should be a fairly large endowment fund from the very first.

Towards the necessary funds the present trustees offer to hand over all the property of the existing trust, valued at about $600,000, and producing nearly $25,000 annually. The Provincial Government has given a grant of $250,000 and authorized the University authorities to grant $50,000, the latter sum to go towards the purchase of a site. The City of Toronto has granted $200,000, all of which must go towards the purchase of a site. Mr. Cawthra Mulock, has given $100,000, and there is in sight another $100,000. It will be obvious, therefore, that if the present endowment of $25,000 per year be retained as an endowment for the new hospital, as it really should, there will be a large amount to be raised otherwise. The citizens will without doubt cheerfully respond to any appeal for funds as soon as the proper authorities are ready to ask for donations.

The Present Building.

Already the question is being asked as to what will be done with the present building and site when the new hospital is ready for occupation. Three or four suggestions have been made, but of course nothing has been even officially discussed. One suggestion is to sell the ground for building sites, in which case the purchasers would probably give good prices for the material of the present building. Another idea is to hand the grounds and buildings over to the House of Industry, as it is evident the present location of that institution will soon be inadequate for the purposes it now serves. Others desire to have the buildings removed and the site added to the city's east end park lands. Several medical men desire to have a self-sustaining hospital established in the existing building, part of it being, however, reserved for a free hospital for the Riverdale district. In defence of this latter

scheme it is urged that the rapid increase of the industrial population and of factories makes it necessary to have hospital accommodation as convenient as possible, and they say, further, that the demand for private wards in hospitals by those who are prepared to pay the full rates to cover all expenses is increasing at a rate which would justify the trustees in establishing a " pay hospital " in the city, at which all free patients in the district should also be given accommodation.—*Toronto Globe.*

The Toronto Western Hospital.

The Board of Governors of the Toronto Western Hospital have much pleasure in making the following announcement to the medical profession:

1. All the beds in the hospital, except such as may be required for city-rate patients, are at the disposal of all medical practitioners in good standing.

2. A new building has just been completed for male and female semi-private patients, at the rate of $7.00 per week. This building is entirely separate from all others.

3. Another new building, in a separate portion of the grounds and completely isolated, is ready for the reception of obstetric cases. The prices will range from $10 to $25 per week. The rooms are all private.

4. The contract has been let for another handsome new building for private ward patients. This building will be completed and ready for occupation by the end of the present year.

The Toronto Western Hospital has always treated the medical profession in a generous spirit, and is happy to be in a position to make the above statements regarding its additional accommodation. The Governors would esteem it a favor if you would visit the hospital and acquaint yourself with its facilities to care for your patients, both medical and surgical, under your own professional attendance.

JOHN FERGUSON, M.D., *Sec.*

Personals.

Dr. Cameron returned from Scotland, September 1st.

Mrs. Bethune, wife of Dr. Alex. Bethune, of Wingham, died September 9th.

Dr. L. F. Barker, of Baltimore, paid a flying visit to Toronto, September 13th.

Dr. R. M. Coulter, Deputy Postmaster-General, Ottawa, visited Toronto September 18th.

Dr. A. W. Mayberry returned from Great Britain and resumed practice, September 21st.

Dr. R. Y. Parry, of Hamilton, was married to Miss Hall, of Penetanguishene, September 14th.

Dr. R. B. Nevitt returned to Toronto September 15th, after a two months' trip to England.

Drs. Migneau and Simard, of Montreal, attended the Polo Tournament in Toronto, August 9th to 14th.

Dr. Jas. A. Robertson, of Stratford, and Dr. Wm. Spankie, of Wolfe Island, went to England in August.

Dr. J. T. Duncan, of Toronto, after a two months' visit to Europe, returned to his home September 4th.

Dr. W. R. White (Tor. '00), of Baltimore, visited his relatives in Toronto in the early part of September.

Dr. Andrew Gordon, after an extended visit to Prince Edward Island, returned to his home August 20th.

Sir James Grant, of Ottawa, sailed from Liverpool for Canada, September 7th, by the Allan Liner *Tunisian.*

Dr. R. A. Stevenson, of Toronto, is now recovering from a somewhat prolonged illness from typhoid fever. He left Toronto for Halifax, September 9th.

Mr. F. M. Caird, Surgeon to the Royal Infirmary, Professor of Surgery in the Extra-Mural College, Edinburgh, paid a visit to Toronto in the second week of September.

Dr. E. A. Spilsbury, formerly of Toronto, but now surgeon on the staff of the Manhattan Eye, Ear and Throat Hospital, New York, paid a visit to Toronto in the early part of September.

Professor Vaughan, of Ann Arbor University, Ann Arbor, Mich., will deliver the opening lecture for the Medical Faculty of the University of Toronto, Monday afternoon, October 2nd.

Dr. A. H. Adams, who was for sometime acting superintendent of the Free Hospital for the Consumptive Poor, Weston, has been appointed a member of the Intern Staff of Toronto General Hospital, in the place of Dr. Kinghorn, who has gone to Liverpool.

Dr. Abraham Jacobi, of New York, delivered the opening lecture for McGill Medical Faculty, September 18th. Dr. Jacobi, who is well described as a grand old man and physician, is now seventy-seven years of age, and is still engaged in active professional practice.

Dr. Charles Sheard, of Toronto, Medical Health Officer, spent a couple of weeks in the latter part of August and beginning of September in visiting New York and other cities in the United States. Although he was supposed to be on a vacation, he spent considerable time in studying various street-cleaning methods.

The following physicians have recently been appointed coroners: Dr. L. E. Bolster, of Sturgeon Falls; Dr. W. J. Dery, of Plantagenet; Dr. A. Maverty, of Toronto Junction; Dr. Forbes E. Godfrey, of Mimico; Dr. T. H. Robinson, of Kleinburg; Dr. Hedley Anderson, of Niagara-on-the-Lake, and Dr. Walter D. Chapelle, of Wyoming.

At the celebration of the Fourth Centenary of the Royal College of Surgeons, held in Edinburgh, July 21st, 1905, honorary fellowship was conferred upon Prof. I. H. Cameron, Toronto; Prof. F. J. Shepherd, Montreal; Dr. A. McCormick, Australia; Lord Lister, England; Baron VonEiselburg, Vienna; Prof. Ernst Fuchs, Prof. Sylvester Saxtorph, Copenhagen; Prof. Guyon, Paris; Dr. Championere, Paris; Prof. Poncet, Lyons; Dr. Paul Segond, Paris; Prof. Terrier, Paris; Prof. Von Bergmann, Berlin; Prof. Bier, Bona; Prof. Azerny, Heidelberg; Prof. Conig Jena, Baron Saneyeshi, Japan; Prof. Halsted, Baltimore, and Prof. McBurney, New York.

Dr. Bruce Riordan, of Toronto, spent the month of August at New London, Conn., and on his return home stayed a couple of days in Montreal, where he was the guest of Dr. Hutchison.

Dr. Allan Kinghorn, who was recently appointed a doctor of the House Staff of the Toronto General Hospital, has been awarded the Johnston Colonial Scholarship in the University of Liverpool. Upon graduating in 1904 Dr. Kinghorn was awarded the John Brown Scholarship, and spent the following year in the laboratories in the University of Toronto, making research on the subject of immunity. It is expected that during the coming year he will be engaged in pathological research in connection with the origin of cancer. Dr. Kinghorn left Canada for England, September 12th.

Obituary.

DR. GILLIES.

Dr. Gillies, of Teeswater, died August 15th, aged 69. He graduated from McGill University, Montreal, in 1867.

DR. T. W. POOLE.

Dr. T. W. Poole, of Lindsay, died at his residence, August 28th, after a lingering illness, aged 74. He graduated from Victoria University in 1856.

THOMAS JOHN BARNARDO, M.D., F.R.C.S. (EDIN).

Dr. Barnardo, the well-known philanthropist, of London, died suddenly, September 20th, from angina-pectoris, aged sixty. In his student days he expected to become a missionary in China. At the time of the outbreak of cholera in London, in 1866, he attended many of the poor in the east end of London, where he organized a ragged school, and eventually formed the organization which established the "Barnardo Homes" in all parts of the world.

DR. DEWAR.

Dr. Dewar, one of Ottawa's best known physicians, died September 7th, aged 40. He graduated from McGill University in 1888. He had been suffering for a time from acute Bright's disease, which, however, was not considered serious until the evening of September 6th, when he suddenly became worse and died in a few hours.

DR. FEE.

The city of Kingston was much shocked, August 31st, to learn that Dr. Fee, the Medical Health Officer of that city, had fatally shot himself. The act was the result of melancholia, due to serious disease of the eyes, one of which had become blind. He graduated from Queen's University in 1862, and for many years was very successful in practice in Kingston. In 1886 he was appointed Medical Health Officer, and proved himself honest, faithful and energetic. We are told by the local newspapers that he was well known throughout the city of Kingston for his kindness of heart and for the time and service he gave to the sick poor.

Book Reviews.

Diseases of the Kidney, Diseases of the Spleen, and Hemorrhagic Diseases. By Drs. H. Senator and M. Litten, of Berlin. Edited, with additions, by James B. Herrick, M.D., Professor of Medicine in Rush Medical College, Chicago. Octavo, 816 pages, illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.00 net; Half Morocco, $6.00 net.

With the appearance of this, the eleventh volume of Saunders' American edition of Nothnagel's Practice, the work nears completion, the final volume on the heart being now in active preparation. Like the others, this volume can be taken as the acme of knowledge on the subjects embraced. Professor Senator's clear style, systematic arrangement of facts, and logical reasoning make his articles on the kidney indispensable to the practitioner. The editor, Dr. Herrick, has enlarged on certain points whenever necessary, especially regarding treatment, diagnosis, urinary analysis, etc., so as to increase the value of the work to the general practitioner. He has also added articles on cryoscopy and phloridzin glycosuria.

The sections on the spleen and the hemorrhagic diseases were written by Professor Litten, whose pioneer work in these fields is widely known. The articles on the mosquito and its relation to malaria, on splenic anemia, on congenital icterus with splenomegaly, and on the X-rays in the treatment of leukemia have been brought down to date by the editor. Indeed, the editor's interpolations add greatly to the practical value of the volume, and we are sure such an authoritative work on these subjects has never before been published.

Miscellaneous.

THE AMERICAN PHYSICIAN.

To look at ourselves and our affairs through the eyes of others is often very enlightening; it is at least suggestive. The *Medical News*, Jan. 7th, 1905, quoted a chapter from "As a Chinaman Saw Us," a book published by D. Appleton & Co., New York City, from which we quote certain portions as follows:

"The Americans have made rapid advances in medicine and surgery and they have some extraordinary physicians. From two to four years of study completes the education of some of the doctors, and hundreds are turned out every year. Some are of the old and regular school of medicine, but others are called homeopathic, which means that they give small doses of the more powerful medicines. Then there are those who practice in both schools. Indeed, in no other field does ignorance, superstition, credulity and lack of real education display itself as among the American doctors and healers. I believe I could fill a volume by a mere enumeration of the diabolical and absurd nostrums offered by knaves to heal men who profess to hold in ridicule the Chinese doctors."

After enumerating with astonishment the varieties of healers, as Eddyites, faith curists, spirit doctors, fake hypnotists, water curers, osteopaths, color doctors, electric healers, etc., he continues:

"But the most amazing class comprise the patent medicine men, who are usually not doctors at all, but buy from someone a 'cure' and then advertise it, spending in one instance which I investigated, $1,000,000 a year. Every advantageous wall, stone or cliff in America will be posted. You see the name at every turn, and the gullible Americans bite, chew and swallow.

"It is not overstating facts when I say that three-fifths of the people buy some of these patent nostrums, which the real medical men denounce, showing that the masses of the people are densely ignorant, the victim of any faker who can shout his wares loud enough. In China such a thing would be impossible; the block would stop the practice; but the Americans assure me that China is a thousand years behind the times, for which let us be devoutly thankful.

"I have not enumerated a tenth of the kinds of doctors who prey on these unfortunate people. There are companies of them who guarantee to cure anything, and skillfully mulct the sick of their last penny. There are retreats for the unfortunate, farms for deserted infants, and homes for unfortunate women, carried on by villains of both sexes. There are travel-

ling doctors who go from town to town, who 'cure while you wait,' and give a circus while talking and selling their cures; and in nine cases out of ten the nostrum is an alcoholic drink disguised.

"In no land under the sun are there so many ignorant, blatant fakers preying on the people, and in no land do you find so credulous a throng as in America, yet claiming to represent the cream of the intelligence of the world; they are so easily led that the most impossible person, if he be a good talker, can go abroad and by the use of money and audacity secure a following to drink his salt water, paying a dollar a bottle for it and singing his praises. Such a doctor can secure the names and pictures of judges, governors, senators, congressmen, prominent men and women, officers of the volunteer army, artists, actors, singers—in fact, prominent people of all kinds will provide their pictures and give testimonials, which are blazonly published. These same people go to a Chinese drug shop and laugh at the 'heathen' drugs, and wonder why the Chinaman is alive. America has a body of physicians and surgeons who are a credit to the world, modest, conscientious, and with a high sense of honor, but they are as a dragon's tooth in a multitude to the so-called 'quacks' who take the money of the masses and prey on them, protected in many cases by law. No one profession demonstrates the abject credulity of the great mass of Americans as that of medicine. . . .

"Of the best physicians in America one cannot say enough in praise. I was most impressed with their high sense of honor. They have an agreement which they call their 'ethics' by which they will not advertise or call attention to their learning. Consequently, the lower and ignorant classes are caught by the blatant chaff of the patent-medicine vendors and the 'quack' doctors. What the word 'quack' means in this sense I do not quite know; literally it means the cry of a goose. The 'regular doctor' will not take advantage of any medicine he may discover or any instrument; all belongs to humanity, and one doctor becomes famous over another by his success in keeping people from dying. The grateful patient saved tells his friends, and so the doctor becomes known. In all America I never heard of a doctor that acted on the principle which holds among our doctors, that the best way to cure is to watch the patient and to keep him well, or prevent him from being taken sick. The Americans, in their conceit, consider Chinese doctors ignorant fakers; yet, so far as I could learn, the death-rate among the Chinese, city for country, country for country, is less than among Americans. The Chinese women are longer-lived and less subject to disease. In what is known as New England, the oldest well-populated section of the country, people would die out were it not for the constant accession of

immigrants. On the other hand, the Chinese constantly increase, despite a policy of non-intercourse with foreigners. The Americans have, in a civilization dating back to 1492, already begun to show signs of decadence, and are only saved by constant immigration. China has a civilization of thousands of years, and is increasing in population every day, yet her doctors and their methods are ridiculed by Americans. The people have many sayings here, one of which is, 'The proof of the pudding lies in the eating.' It seems applicable to this case."—*Jour. A. M. A.*

Patenting Instruments by the Profession.

The recent discussion on this subject has directed attention anew to this vexed question. There are sentimental reasons which will lead the profession to avoid patenting instruments, though the equity of such a rule is more than doubtful. If there is any justice in copyrighting a book, it would seem to be equally just to patent an invention. Both are the product of individual effort, a sort of activity that the State protects. The feeling on the part of physicians that all instruments and means devised by them should be open to the whole profession has led to an objection to patenting instruments.

In many instances this has been disastrous, there having been no more striking example of it t hanthe Murphy button. This instrument as originally devised contained a spring. The whole value of the instrument lay in the exact adjustment of the tension of this spring. This was carefully worked out by Dr. Murphy, so that when the button was in position it should produce sufficient pressure on the opposed edges of the peritoneum to cause pressure atrophy, but without cutting through and without causing necrosis. After the button was placed on the market it was copied by instrument makers, who, observing that the two halves of the button were connected by a spring, simply used one of about the same strength and size. The result was a number of imperfect buttons were and are upon the market. There is no telling how many lives have been lost by the failure of Dr. Murphy to patent the button.

Dr. Porter, at the last meeting of the American Medical Editors' Association, told of an interesting experience. He devised at one time a stethoscope which was extensively copied by instrument makers, but the cost of the product was cheapened at the expense of quality in the instrument. These cheaper patterns finally displaced the product of the original maker, so that the stethoscope as originally devised is no longer on the market. The result is that Dr. Porter recommends to his classes a stethoscope devised by a physician who patented the article.

Much can be said on both sides of the question, but on the whole it seems as if the interests of the profession and the public would be fully subserved if physicians were encouraged to patent instruments. Their failure to do so often defeats that principle of greatest good to the greatest number, which in the end should be the test in judging the practicability of any such measure.—*Medicine.*

Modern Therapeutics and Pharmacy. — By FREDERICK HADRA, M.D., of San Antonio, Texas.

In speaking of ethical proprietaries, he says: "I should be sorry, indeed, if the prejudices of any member of this society should so far overcome his better judgment as to banish all or most of these drugs from his practice without investigating their merits. So, if we desire, a local antiphlogistic effect, and have to choose between the ancient, unsightly, and troublesome flax-seed poultice and the new proprietary article called Antiphlogistine, a physician must needs be prejudiced, indeed, who will prefer the former. . . . It may be a matter of theoretical indifference what preparation we prescribe, but it may be quite a different matter with the patient who has to use it for long periods. . . .

"Does it not strike you as somewhat incongruous that we alone of all professions and trades should rise up in arms against a co-ordinate branch which is continually striving to assist us in improving our therapeutic weapons? If we would take advantage of the opportunity offered to make intelligent selection of such preparations of drugs of reliable concerns as appeal to reason and common sense, those of us who do so will certainly have an advantage over those who do not."

As regards the refilling by the druggists of prescriptions of proprietary remedies, he says: "If I am called to treat a sprain of the ankle, and find it necessary to order an antiphlogistic application, it would be just as easy for the patient to send to his druggist daily for more flax-seed meal or iodine, as it would be for him to order more cans of the more cleanly proprietary preparation, Antiphlogistine. A tonic or cough medicine, quinine mixture or capsule would share the same fate, whether proprietary or extemporaneous. . . . .

"If the intelligent use of the drugs mentioned is not injurious *per se,* why should we protect the laity against their use any more than against the employment of any other drugs? Would the committee advocate the abandonment of calomel, castor oil, mag. sulph., quinine, flax-seed meal, paregoric, laudanum or carbolic acid because the laity can also go to the

drug store and purchase these just as they can Cascara preparations, Phenacetin, Listerine, Antiphlogistine, etc.?"—Extracts from an article in the *Texas Medical Journal* for March, 1905.

Cold Affusion in Delirium Tremens.

Sir William Broadbent, F.R.S. (*Brit. Med. Jour.*)—For many years the writer has used cold affusion in delirium tremens, always with immediate success, but the treatment does not seem to have found its way into the text-books. The patient is stripped naked and lies on a blanket over a waterproof sheet. A copious supply of ice-cold water is provided, and a large bath sponge dripping with the iced water is dashed violently on the face, neck, chest and body as rapidly as possible. He is then rubbed dry with a rough towel, and the process is repeated a second and third time. He is turned over and the wet sponge is dashed on the back of the head and down the whole length of the spine twice or thrice, vigorous action with a bath towel being employed between the cold water attacks. By the time the patient is dried and made comfortable he will be fast asleep.

A man of about thirty was addicted to alcohol. After a week of continuous drinking he had delirium tremens, or, perhaps more strictly, hallucinations; he was more violent and had less delirium ebriositatis, since, with characteristic tremor than is usual in delirium tremens proper. A complication which almost precluded recourse to opiates or sedatives was the presence of a large amount of albumin in the urine. The treatment was carried out with the result of sound, refreshing sleep and speedy recovery. The albuminuria gradually disappeared.

The writer has used cold affusion even when there was extensive pneumonia with the delirium tremens. When the patient wakes up the tremor is gone, the relaxed, perspiring skin is warm and dry, and the weak, flickering pulse has recovered tone.

In rheumatic and enteric hyperpyrexia the effect of the cold bath is not simply due to the abstraction of heat. The graduated bath has much less effect than the plunge into cold water, and may have no effect at all unless cold affusion is applied to the head. It is not easy in domestic practice to give a cold bath in these cases, and may be impossible. Affusion by means of a bath sponge, followed up by a wet sheet, may meet the emergency.—*Med. Review.*

The Canadian Practitioner and Review.

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Original Communications.

SPECIAL ADDRESS ON OPHTHALMOLOGY.*

BY J. W. STIRLING, M.B.,
Lecturer on Ophthalmology, McGill University.

Mr. President and Gentlemen,—I have to thank you for the honor you have done me in asking me to deliver the special address on ophthalmology at this meeting of the Canadian Medical Association, and more especially do I appreciate it from the fact that this meeting is held in my native city. One cannot but feel a certain amount of diffidence in addressing such a large assembly of one's fellow-workers in our noble profession, but I trust that what I have to tell you may both be of interest to you and also of some assistance in the prosecution of your professional calling.

I must claim to a certain extent the indulgence of my fellow-workers in ophthalmology, who may be here, if I do not present them anything very advanced. I would remind them of the fact that I am here to deliver an address to the profession as a whole, and that technical points which would be of interest to them might be far from interesting to the majority of my hearers. Yet what I have to say may not be lacking in interest for them.

I have chosen as the subject-matter of my paper a few salient points in the diagnosis and treatment of the more common diseases of the eye. My communication will be almost

*Delivered before the Dominion Medical Association at Halifax, August, 1905.

entirely based upon my own experience, drawn from the very large clinical material at my disposal in the Montreal General Hospital.

Conjunctivitis is one of the commonest eye diseases which confronts both specialists and general practitioners during their career, yet in no other ocular disease has there been more room for advance, both in the matter of diagnosis and of treatment. Happily, during the past few years great progress has been made in both these particulars, and the results have been crowned with success. Looking back over my comparatively short career, well do I remember how in the old hospital days in London there was a routine treatment for conjunctivitis; the diagnosis was strictly limited by the nature of the secretion and condition of the conjunctiva, and the treatment consisted in the use, or I might say the abuse, of various astringents. In some cases this treatment happily hit the mark, but in others the result was a failure or else a prolonged chronicity. With the promulgation of the germ theory, there was an opportunity for advance, yet but little was done in this direction in eye diseases for some years. Astringents were at this time dropped to a certain extent, and antiseptic lotions took their place, yet a varying amount of empiricism persisted, and results were not always so successful as one could wish for. During the past few years, however, great strides have been made by Koch-Weeks, Morax and Axenfeld; new germs have been discovered; their relationships to certain forms of ocular disease have been worked out; the conditions specially favoring their development have been studied; the symptoms they give rise to have been noted; and lastly, what is of most importance to the clinician, appropriate remedies are being discovered. There is, however, must left to be done, as evidenced, for example, by the uncertainty which overhangs the germ of that scourge, trachoma.

To start with, be it remembered the conjunctival sac in the new-born is held to be free from bacteria, but immediately the infant has entered on its existence in this world, the conjunctiva is exposed to infection from the atmosphere or from the skin, with which it is in immediate proximity at the edges of the lids. The organisms thereafter found in the eye vary greatly in their nature and pathenogenicity. Their malignancy depends a great deal upon the resisting power of the organism. It would appear that it is impossible to render the conjunctival sac absolutely sterile, since any bactericide sufficiently strong to effect this would exert a deleterious influ-

ence on the eye. The tears exert a certain bactericidal action, which may be due to a mere dilution of the secretion, and this is seconded by the muscular action of the lids in winking, which force the secretion into the tear sac (the drainage system of the eye), whence it escapes into the nose. One thing is certain, the tears are a bad culture medium for bacteria.

Another important factor in limiting the development of the bacteria in the eye is the temperature of the exposed eye-ball. McGillivray, of Dundee, has worked this out very carefully, and has shown that the surface temperature of the exposed cornea is about eighteen degrees below that of the body temperature, whereas if the lids are kept closed the conjunctival and corneal surface temperature soon rises, thereby favoring the development of many bacteria. In addition to this, of course, the eyelids being closed does away with the mechanical drainage function, to which I have just referred. A good example of this is frequently met with in cases of phlyctenular disease, in which the eyes have been kept bandaged. This closure is invariably followed by a marked extension of the disease, which can be readily checked by desistence from the use of compresses, and also what amounts to the same thing, by the prevention of the child burrowing its head into pillows and cushions.

Of course, when operating on the eye we have to bandage it afterwards, but this is with the sole intention of getting a speedy union of the wound, and by this means preventing the possibility of a deep infection of the eye. As soon as firm union has taken place all closure of the lids should be abandoned.

In my clinic at the hospital all cases of conjunctivitis, tear-sac trouble and ulcerative keratitis undergo a thorough bacteriological examination before treatment is undertaken; invariably, also, a bacteriological examination of the secretion is made in all cases before operation.

The invaluable nature of this examination must, of course, be self-evident to you, firstly as a means of diagnosis, secondly as a precautionary measure, thirdly as an indication for treatment.

This bacteriological examination, short of making cultures of the germs, is by no means difficult, and should not be beyond the power of any medical man. The little extra trouble that it entails upon the practitioner will be amply rewarded by the results obtained.

I may, perhaps, be allowed to describe the very simple pro-

cess of making this examination, although doubtless the majority of you know it already.

With a small platinum wire, sterilized in a spirit lamp's flame, a small amount of the secretion is removed from the conjunctival sac and smeared over a glass slide. The great point in the smearing is to tease the secretion well out on the slide; a drop or two of gentian violet solution is dropped on the smear; after twenty-five seconds this is washed away with water; a few drops of Gram's iodine solution is dropped on and left for about fifteen seconds; it is washed off with alcohol until no more colored matter is observed to come away; the specimen is then washed with water and a five per cent. solution of safranin is dropped on the specimen and left for five seconds, when it is washed off with water. This is a routine method for the ocular secretions.

As you all know, conjunctivitis has been classified according to the nature of its secretion or conjunctival changes, *e.g.*, catarrhal, muco purulent, granular, and membranous types, but since bacteriological investigations have been carried out there is a strong likelihood that this will be changed. Similar clinical symptoms are caused by very different forms of bacteria, the treatment of which varies greatly according to the bacterial finding.

In the catarrhal type of conjunctivitis we recognize two main varieties, the acute and the chronic, the symptoms of which are too well-known to you to need repetition. The vast majority of cases of the acute type has been found to be due to the presence of the Koch-Weeks bacillus, and in only a few cases have other germs been discovered. This form of bacillus as a rule attacks children, and has even been found in the newborn. As a rule these bacilli can only be discovered during the first few days of the disease.

The bacilli lie between the leucocytes and also within the protoplasm. Sometimes they even extend into chains of two or three links side by side; they are decolorized by Gram's iodine; they have an incubation period of two or three days; and the second eye is generally infected two or three days after the first; they seem to penetrate into the superficial layers of the epithelium and not into the deeper tissues; they do not give rise to chronic conjunctivitis. The bacilli appear as very short, fine rods, staining less deeply than the nuclei of the cells; the ends are rounded and also show a deeper polar stain. I have a specimen under the microscope for your observation.

The treatment of this form of conjunctivitis consists in the

application of nitrate of silver, two per cent. solution, or the three per cent. solution of largin.

Entirely distinct from this form is a chronic variety of catarrhal conjunctivitis affecting mainly the conjunctiva of the lids and especially well marked at the inner and outer canthi. This disease sometimes goes by the name of angular conjunctivitis; there is a slight mucous secretion, the conjunctical papillæ are not swollen, the inner canthus and the lid margins are markedly red; in time the roots of the cilia become affected, as does also the tarsus; the cilia then fall out and the lid margins curl inwards. It occurs at all ages, but more especially in adults, and is most frequently met with during the months of June, July and August. Superficial infiltration of the cornea occurs and sometimes even severe purulent spreading ulcers are found, which bear a marked similarity to the malignant ulcus serpens.

In 1896, Morax and Axenfeld both discovered a diplobacillus, which by a series of exhaustive investigations they found to be the cause of this disease. The bacilli are large 2u by 1u, and generally occur in pairs and chains; they are decolorized by Gram's method after staining with gentian violet. The disease is very infectious, and the bacilli retain their virility for a long time.

It has been found that solutions of sulphate of zinc have almost a specific action in the cure of this disease, and this may be freely applied even when ulcerations of the cornea arise. The zinc salt is used in a solution varying in strength from a half of one per cent. up to two per cent., the milder collyria being reserved for those cases exhibiting the greatest irritation. It has also been found that the solutions of the silver salts appear to be inert in the treatment of this condition. I might cite as an example of the action of this drug, even in severe ulcers, one case out of several which have lately come under my observation. The patient had developed an ulcer in the cornea, probably of traumatic origin, for which he had been treated at his home in the country, near Montreal. He thought that his eye had been scratched very slightly with a twig, and did not pay much attention to it until it became very painful, when he sought advice from the family physician, and treatment failing to check the condition, he came into my clinic at the General Hospital.

I found a large purulent ulcer of the serpiginous type. The condition was so typical that I immediately classed it as an ulcer due to pneumococcus infection, and prescribed antisep-

tics and cauterization of the ulcer, thus, you will notice, departing from my rule of having a culture taken before starting treatment. The ulcer continued to spread rapidly, so that in forty-eight hours I felt there must be something lacking, either or both in diagnosis and treatment. Whereupon I had a culture taken, and to my own surprise and that of the pathologist, Dr. McKee, he found the Morax-Axenfeld diplobacillus. The treatment was immediately changed, and the solutions of zinc sulphate substituted for the antiseptic lotions. The change within twenty-four hours was marked, and the progress thereafter towards recovery was very rapid. I have cited this case in full in order to impress both the importance of the bacterial examination of these ocular conditions, and also its value as indicating the proper treatment.

The metallic salts break up in the conjunctival sac and act by precipitating the albuminates, which agglutinate the euzymes and active agents of the inflammation, the freed acid of the salt thereupon exerting its caustic action.

It is interesting to note that this bacillus maintains its virility in cultures up to the seventh generation. The diplobacillus enters the eye either from the air, in a dried or fluid form, or by actual contact; it has been found in the posterior chambers of the nose, whither it may have come from the eye by way of the tear-duct. On the other hand there is a possibility of its spreading in the opposite direction from the nose to the eye. This diplo-bacillus retains its activity and power of reproduction after being dried for fourteen days, but this is likely due to its being surrounded by a sheath of mucous, which prevents it from really being absolutely dried up. The presence of this germ, and its attendant inflammation, have been frequently reported in Europe, and its occurrence has been noted a few times in the United States; but as far as I am aware its first definite appearance in Canada has been noted in my clinic at the General Hospital by Dr. S. H. McKee. The disease is by no means a new one, but the bacterial cause had not been traced until lately.

Under the microscope you will find several specimens, also a culture on blood-serum of Morax-Axenfeld bacillus, forty-eight hours in incubator—forms little pits which later coalesce and liquify.

We have another type of conjunctivitis frequently associated with infiltrations of the cornea, which take on a malignant type and develop the above-mentioned serpiginous ulcer; later on it may be complicated by iritis. The conjunctiva is at first

slightly rose red; this is rapidly followed by great swelling and even by the formation of a cropouns membrane on the inner surface of the lid; the secretion is watery, and very frequently there are small hemorrhages; it is especially found among young children and young adults; it occurs in epidemics; it is contagious. The germ is found to be a diplobacillus lanceolatus, or pneumococcus, as it is sometimes called; they are lenceolate in shape and tend to form short chains, which with some other points suggest a similarity to the streptococcus family. The treatment of this condition is active antiseptics and the application of the galvano cautery to the ulcer.

Of the purulent types of conjunctivitis that exist, that caused by the gonococcus is the one most frequently met with and most disastrous in its results; it is extremely contagious, but the proportion of individuals suffering from gonorrhea who develop gonorrheal conjunctivitis is comparatively small. This comparative freedom from ocular complications in gonorrhea is very suggestive to any one having much to do with the disease. It would almost appear as if the gonorrhea itself confers a certain degree of immunity. In addition, the escape of the eye from this virulent infection must be partly due to the protection of the lids and the washing away of the secretion by the tears. It would appear as if the resisting power of the individual has a good deal to do with the severity of the diseases. since in many cases which have come under my notice I have found that the proportion of gonococci present bears no definite relation to the severity of the disease. Many of the worst cases I have seen showed under the microscope but a few gonococci, whilst in others in which the disease ran what we might call a benign course, great quantities of gonococci were present. It is needless for me to speak about the characteristics of this well-known germ, but there is one point I wish to impress upon you, and that is the fact that the gonococcus is capable of invading the intact corneal epithelium, whenever the pus is allowed to stagnate in the eye; hence the great importance in treatment of a very complete and frequent irrigation of the conjunctival sac.

I have found gonococci in the sac many days after the cessation of the discharge, which points to the necessity of continuing the treatment for some time after the apparent cure.

In this connection I wish to draw your attention to an interesting form of conjunctivitis, of gonorrheal origin, but in which the infection is endogenous, and which is frequently

associated with iritis. The inflammation as a rule occurs about the period of the appearance of the joint complication of gonorrhea. As you know, the gonococci are carried by the blood stream to the joints, and there set up inflammation, and the same type of inflammation may occur in the eyes. It is an irritable form of conjunctivitis; the secretion is watery and has a tendency to chronicity and to relapses. No gonococci are found in the secretions of the eye, although they may be present in the tissues; there is considerable pain and photophobia. The local treatment must be mild, and if there be any urethral trouble present it, of course, must be attended to. The iritis that occurs in these cases possesses also the same tendency to relapses, but I have found that this tendency diminishes greatly with the improvement of the urethral condition. This form of gonorrheal eye trouble may be considered a sort of general toxemia, manifesting itself in some weak spots. In cases of gonorrheal conjunctivitis we sometimes get a mixed infection, streptococci and pneumococci being present, and it would appear as though the presence of the streptococci favors an increased severity of the infection.

Membranous conjunctivitis is, happily, of rare occurrence, at any rate the true diphtheritic type; in fact, during my career in Montreal I have not come across a true case of this (although I have seen many cases of membranous conjunctivitis); a few I have seen on the continent of Europe. The severe cases of membranous conjunctivitis which I have met with were at first very suggestive of true diphtheria, but on close investigation they proved to be due either to that allied germ, the bacillus-xerosis, or to staphylococci.

As being of interest in this connection, I might cite a case of my own which I saw not very long ago. The patient was an infant about nine months old, and suddenly developed an intense inflammation in the right eye; a gray membrane formed over the palpbral conjunctiva which could not be rubbed off, but left a gray surface beneath it; there was great swelling of the lids; a smear showed a bacillus which was at first considered to be the Klebs-Loeffler diphtheria bacillus. The culture, however, the next day, showed this not to be the true Klebs-Loeffler, but like the allied bacillus-xerosis (of which I will have a word to say to you later on). There were also staphylococci present. The treatment of this case was simple, the use of argyrol, twenty per cent. strength, and mild boracic acid lotions. Recovery took place in about three weeks. I will not detain you with any details in regard to the diph-

theria bacillus, but I wish to say a few words in connection with that very puzzling type of germ, the xerosis bacillus, which I found in the above case. This germ is found very frequently in the normal conjunctiva, so that it would appear there must be a predisposition on the part of the patient before it can exert any malign action. Little is known of its true nature and action; it is identical morphologically with the diphtheria bacillus. It is stained by ordinary aniline dyes, and grows on the same culture media forming similar colonies. It is different from the diphtheria bacillus in not producing an acid reaction in neutral peptone bouillon. Frankel regarded it as a non-virulent diphtheria bacillus, which may become virulent when mixed with staphylococci; others regarded it as simply the non-virulent stage of the diphtheria bacillus.

A year ago a case of that comparatively rare disease known as Parinaud's conjunctivitis was treated by me. The characteristics of the disease are the huge granulations which develop on the palpebral conjunctiva; these rapidly increase in size; there is also enlargement of the pre-auricular and inframaxillary and cervical glands. There is a rising temperature, but the course of the disease, which is not rapid, tends gradually to complete resolution. An elaborate bacteriological examination and report was made by Dr. John McCrae, pathologist at that time to the General Hospital. Pure cultures of a bacillus resembling the Klebs-Loeffler were found during twenty-five days of active treatment of the eye. This bacillus was not found in the other eye, nor in the nose or throat. This bacillus gradually disappeared with the recovery of the eye. It would thus appear that in this case we were dealing with either a virulent form of bacillus-xerosis, or else a less toxic than ordinary bacillus diphtheria.

These are a few of the main points in connection with conjunctivitis which I thought might be of interest and value to you. There is no doubt, in regard to all these germs, that whenever they develop a tendency to form chains, that is, as it were, reverting to the streptococci type, there is a coincident increase of virulence.

In addition to all that I have told you, it is hardly necessary that I should insist upon your not losing sight of one great point, the fact that the eye is part of the whole bodily mechanism, and that in the local treatment of any eye condition one must not lose sight of the general constitutional state. It is an altruism that if the general physical condition is lowered there is a corresponding lowering of resistance to all forms

of infection, and this holds true as much in eye lesions as in general constitutional disturbances. A close attention is demanded to general hygiene, fresh air and cleanliness, both local and general, proper dieting, etc.

The second portion of my address I desire to devote to a consideration of the functional light perception of the eye, and to the diagnostic value of it. This is a symptom which is, as a rule, but scantily described in the text-books, yet it is, nevertheless, one of much importance in the differential diagnosis of certain eye diseases.

What is of much importance, is that the said eye diseases are generally of constitutional origin, or secondary to serious trouble elsewhere. Many a time I have wondered if it were not possible to discover some symptom which would be of value as a hint of intra-ocular eye trouble, in cases in which, from some reason or other an ophthalmoscopic examination cannot be made. To examine the eye thoroughly with the ophthalmoscope demands continued practice, and very few general practitioners are able to do this; hence it is under these conditions that a symptom roughly pointing to fundus trouble of the eye may be of use. As an example of the value of this, I may mention one case out of many which have come under my observation. The patient was referred to me by the family practitioner in order to have the refraction tested, the symptoms calling for this being headache and diminution of the visual acuteness. On proceeding to examine the patient I found that there was marked nephritic retinitis. This ocular condition is, as you know, associated with chronic varieties of nephritis, in which the general symptoms are occasionally not very pronounced; hence, failing an ophthalmoscopic examination of the eye, the mistake might be considered possible. It is just in such cases as this that an examination of the light perception, even roughly made, would serve as an indication to the physician of a retinal change being the cause of the eye symptoms, and would call his attention to the desirability of a thorough physical examination.

In examining the light sense there are two points which call for consideration, the first being the minimum amount of illumination which will give rise to the sensation of light; and, secondly, the smallest difference between two degrees of illumination which it is possible for the patient to perceive. The simplest method of testing the minimum light perception is to diminish the illumination of our card of test types, until it just begins to affect our own visual acuity (taking for

granted that our own eye is normal). We can then observe whether there is a corresponding or greater diminution in the visual acuity of the patient. In order to test the light difference we use what is known as Bjerrum's or De Wecker's photometric test types, which I here show you, and which consist of Snellens' types, printed white on gray. The contrast between the letter and its background, as you will see, gradually diminish as we descend the board. There is a fraction marked at the end of each line, which will give you an approximate idea of the value of the light difference in any case. The result, of course, cannot be mathematically accurate, but can be approximately enough correct for practical purposes. The main difficulty in these tests is the variation of perceptive power of the retina, occasioned by the state of so-called adaptation. For instance, an eye which has been in the dark for some time is extremely more sensitive to light than one that has been exposed to strong daylight. We can, however, compare our own light perception with that of the patients, presupposing our own eyes are in an approximately normal condition. The diminution of the light perception is mainly caused by a pathological change in the outer or pigmentary layer of the retina, which layer goes by the name of photochemical apparatus of the eye, whilst a diminished value of the light difference perception is most marked in lesions affecting the optic nerve. In retinal and choroidal lesions the light minimum is greatly reduced, as a rule, and the light difference is but very slightly affected, hence a diminution of the light perception, pointing, as it does, to a lesion of the retina or subjacent choroid (which latter, as you know, is the nutritive supply for the outer layers of the retina), directs the attention to the possible cause of such a lesion. Now, the main causes of the retinal conditions are certain toxemic constituional states, and your attention being drawn to this fact, you would institute a thorough general examination of the patient. The nephritic type of retinitis is the one most frequently met with, and as you know, the prognosis is extremely grave, the patient's life rarely being prolonged eighteen months after the eye lesions are demonstrated.

Next to this we have a diabetic type of retinitis, in which we have the same failure of the light perception, but in which the prognosis is not nearly so grave; further, there are the syphilitic types, some of them associated with circumscribed exudations in the choroid and retina, which are characterized also by the distortion of objects looked at, due to the exudate forc-

ing the cones of the retina apart or by its contraction crowding them together. Another point in the diagnosis of these cases is that the perception of colors is changed, the appreciation of blue being first lost, and this is in marked contradistinction to the failure of vision due to true nerve lesions, in which green is the first color to disappear. I may mention here, as an interesting contrast to these conditions that in cases of hysterical amblyopia you will frequently find the vision is improved under diminished illumination. As to the diminution of the power of appreciation between various degrees of illumination, this condition is most marked in cases of optic atrophy, and would be of value thus to you in the differential diagnosis between lesions purely affecting the retina and those of the optic nerve. I will not dilate here upon the visual field and its indications, but I think I have said enough to draw your attention to a simple differential diagnostic symptom which cannot but be of use to you.

2. We must not be in a hurry to consider all cases of headache and diminished vision as due to a refractive error.

3. In neurasthenic individuals there is a marked susceptibility to any peripheral irritation, so that a very slight error of refraction may give rise to marked symptoms, such as pain and headaches, etc., while in the case of calm, phlegmatic individuals a comparatively high error may cause little or no trouble. The same holds true, of course, in the well-known category of ocular muscular insufficiencies, for given a slight error in any case there is a more determined and continuous effort to overcome it, with the production of a corresponding fatigue, whilst in high degrees of the same trouble there being an utter inability to overcome it, the patient makes no attempt to do so, and accordingly escapes the trials of asthenopia. I feel obliged in this connection to speak rather strongly against the custom of allowing opticians to correct refractive errors. If there be any astigmatism present, which is likely in the majority of cases, the proper correction of it is virtually impossible without the use of mydratics. Again, especially in cases of myopia of high degree, there are not infrequently marked retinal changes, which, unless properly looked after, tend to become worse and end in partial blindness. Many cases occur in which an apparent error of refraction is simply an indication of severe fundal and constitutional trouble, and one I may mention, which, having seen but the other day, is comparatively fresh in my memory and is of interest for two reasons. This lady had been wearing lenses prescribed for

her by an optician, and which had been changed from time to time during the past year, until latterly marked myopia began to develop. On examining her eyes I found the light perception greatly diminished; there were some fine opacities in the lens; there were also some fine retinal changes which had evidently been in existence for some time. Further examination of the urine revealed the presence of marked diabetes. This case is also interesting as an example of the value of the light sense test.

In the words of Hilton Fagge, diabetes, being a derangement of the chemical labor of nutrition, you can readily understand how the eye must suffer. The retinal affection in its earliest stages evidencing itself by the alteration of the light sense, and the myopia being as a rule due to the opacities of the lens altering its refractive power.

Astigmatism in its many forms is without doubt the cause of both local and systemic disturbances. Bearing this in mind, and recognizing the fact that only accurate correction is of any value, it must be self-evident to you that no optician is competent to perform this work. In the words of Maitland Ramsey, you have to remember that the eye is not only in the body, but of the body.

REMOVAL OF THE UTERUS.*

By T. SHAW WEBSTER. M.B., M.D.C.M.,
Gynecologist Toronto Western Hospital.

"As a general proposition the removal of the uterus is indicated whenever both tubes and ovaries are to be sacrificed. It is easier to remove the uterus completely with its adnexa than to dig these out and propedly treat their stumps," and "I divide my difficulties by splitting the uterus."

Those who agree with the late W. R. Pryor in making the above statements do not wish to be classed as opponents of conservative surgery. To conserve a functionally-useless organ potent only for future mischief is open to question.

An infected appendix should be extirpated. An unhealthy gall-bladder to-day is taken out. Should not a diseased uterus, whose reproductive function is gone, be treated in the same way, especially if its removal involves less danger to the patient and less difficulty to the operator. Those who have a preference for the vaginal route undoubtedly find that hemisection of the uterus and panhysterectomy is easier than the removal of the tubes and ovaries without the womb.

When a patient has both sets of adnexa involved in suppuration, the whole uterus is found in a pathological condition. There are granulations on the mucous membrane, hyperplasia of the muscular stroma and induration of the glands therein.

Purulent discharge and pelvic pain will continue after the removal of the tubes and ovaries in spite of the repeated use of the curette or any other method of treatment. Such an organ gives what may be termed "the miserable life" to woman. Its removal gives relief. The convalescence is short and attended by no embarrassing circumstances.

The operation is a combination of several distinct surgical procedures, details of which may be found in text-books, and therefore I shall only mention them and take liberty to emphasize a few points that ensure success and the pitfalls that have made this comparatively easy work difficult and unpopular with those who have not mastered the simple technique thereof.

1. The *position* should be the exaggerated lithotomy. Be sure to have the buttocks project six inches or more over the end of the table. Less than that places the operator at a dis-

* Read at meeting of Ontario Medical Association.

advantage. The lower limbs should be extremely flexed upon the body.

2. *Dilatation* and *curettage,* to ensure cleanliness in the field of operation. Swab the uterus with gauze folded over the curette. Do not use the intrauterine douche. I have frequently found the douche fluid had passed through the tubes. When the recto-vaginal pouch was opened it ran out. One of my colleagues put more than a pint of bichloride solution in the abdomen in that way, although the os was fully dilated. The opening of the cul-de-sac saved the patient from peritonitis, but it is safer not to use the intrauterine douche.

3. *Posterior vaginal section* is not difficult and never dangerous. Bland Sutton says, "This is an extremely simple proceeding." Grasp the cervix at the sides with two pairs of bullet forceps (these are not removed until the hemisection is finished), and make traction towards the pubes. Cut the mucous membrane half-an-inch behind its reflection from the cervix with scissors; a scalpel should never be used to do this. Dilate by introducing the scissors closed and open them until two fingers can be pushed in easily. Put down the peritoneum with the fingers. Seize it with forceps and open it with scissors. Then introduce a large pair of curved forceps through this serous button-hole and dilate until four fingers can be inserted. Many operators fail in vaginal section work by trying to operate through a cul-de-sac opening that is too small. It may be widely dilated without the least danger. The wide opening provides also for better drainage, and is, therefore, an advantage ofter the operation. This opening is for exploration, and again permit me to quote from Bland Sutton, who says, "The surgeon is then able to ascertain the condition of the uterus and the ovaries and tubes." Now it can be determined whether both sides are disabled beyond repair, whether conservatism or radical removal is indicated. The latter is before our notice at present.

4. *Anterior vaginal section* is next done. The operator introduces the intrauterine traction forceps and pulls the uterus downwards and backward. The vaginal mucous membrane in front is opened in the median line, and the slit extended both ways to complete the circuit of the cervix by reaching the posterior opening at the sides.

Pryor was careful to leave a narrow strip of mucous membrane at each side between the anterior and posterior openings, his chief reason being greater safety to the uterine arteries. The anterior opening is easy to accomplish through

vaginal mucous membrane, difficult in the dense cervical tissue. Do not make it too near the cervix. Keep at least half-an-inch back. The operator now separates the bladder from the uterus by rubbing it off with the palmar surface of the fingers, pressing hard down upon the uterus, which is held firm and made evident by the intrauterine forceps. Do not forget that the bladder extends laterally upon the broad ligaments. Widen the separation until the uterine arteries can be felt pulsating plainly.

During the separation of the bladder from the uterus a sound in the bladder is no advantage. The uterus is the landmark. Be careful to keep close to it until the utero-vesical pouch is opened.

5. *Bisecting the uterus* is now begun. The intrauterine forceps are withdrawn and traction is now made with the vulsellæ which were inserted into the sides of the cervix at the beginning of the operation. The anterior wall is divided with the scissors from the cervix to the fundus. A special curved director is inserted behind the cervix and passed upward until it appears in front of the pubes. Then from above downward the posterior uterine wall is divided with a probe-pointed bistoury. The director precludes any possibility of injury to the intestines during the hemisection of the posterior wall.

One-half of the uterus is now pushed into the pelvis and the other swings out like a pair of double doors on their hinges. The whole hand can now be passed into the pelvis, and its recesses further explored. With the use of retractors adhesions can be seen and separated, as in laparotomies. The tubes and ovaries can be lifted out of their nests. Rupture of pus sacs may occur, but the abdominal peritoneum is in no danger of being soiled, and post-operative peritonitis cannot occur.

6. When the tube and ovary on one side is free, clamps are applied to the broad ligament, one from above and one from below, and the parts beyond the clamps cut away. The other side is then treated in the same way. The upper clamps may include the ovary or not, as seems wise. Bland Sutton has shown the benefit of leaving an ovary or part of one behind if it is not diseased, in averting the nerve storms of a premature menopause.

During the whole operation no hemostatic forceps are used, and no vessels are ligated. Only a slight oozing occurs when the uterus is divided in the median line.

The loss of blood is inconsiderable, not enough to saturate a pocket handkerchief. The clamps compress the vessels, preventing hemorrhage and thrombosis. They crush the nerves, reducing the after pain to the minimum. They close the lymphatics and obviate sepsis.

7. The dressing is done after the manner of Mikulicz, but first a piece of gauze is inserted between the clamp handles and the lateral vaginal wall to prevent pressure necrosis. The clamps are drawn downward and outward, and held by long special retractors. The bladder is lifted up with a Pryor-Rean trowel. The perineum is held down with a weighted speculum and the space between is filled with long rolls of gauze, which reach from the vulva to above the points of the clamps. The clamps are removed in forty-eight hours. The handles are unlocked and the blades detached by a gentle, twisting movement, and the gauze is taken out in seven or eight days. By this time firm, plastic union is established between the bladder and the rectum, and the clamp sloughs are practically in the vagina, walled off from the abdomen. Two douches each day should be given until the mucous membrane is closed, a period of three or four weeks, but the patients may be allowed out of bed in ten to fourteen days.

If iodoform gauze is used, the percentage of iodoform should be low, as I have seen two cases of iodoform poisoning of slight degree, but very annoying. About two per cent. of all patients are susceptible to it. Hernia never follows vaginal operations, and intestinal adhesions never result from them. The narcosis need not be complete. Absolute relaxation of the abdominal muscles is not essential. Rapidity is an attractive feature of this method, twenty to thirty minutes will suffice. Panhysterectomy is indicated also in complete prolapse in older women and in uncontrollable metrorrhagia, but should the uterus be cancerous it had better be removed *en masse*, so as to avoid soiling normal tissue with cancerous elements and favoring a recurrence.

In conclusion, Mr. President, permit me to quote the following interesting statement from Bland Sutton as an additional argument:

"Experience acquired in the performance of vaginal hysterectomy has taught surgeons that the intraperitoneal relations of the uterus and its appendages may be explored with reasonable safety through an incision in the vaginal culs-de-sac."

ADDRESS TO THE GRADUATING CLASS IN THE FACULTY OF MEDICINE OF McGILL UNIVERSITY, MONTREAL.*

By PROF. J. M. ELDER.

Mr. Chancellor, Members of Convocation, Members of the Graduating Class, Ladies and Gentlemen,—It has been a time-honored custom in connection with the graduation exercises of this Faculty that two addresses should be given, one on behalf of the graduating class, to which we have just listened with so much pleasure, and perhaps profit, and the other a valedictory to the graduating class on behalf of the teaching staff. This year the honor of saying farewell and of wishing God-speed to this class on behalf of the Faculty, has devolved upon me, and I feel more particularly fortunate in that I will not be called upon to address you at any length. For my task, in so far as it should be advisory, has been largely anticipated by the valedictory that our most distinguished graduate (Dr. Osler) delivered here a short time ago, and to which we listened with mingled feelings of regret and pride—a valedictory which, I trust, no one of us will ever forget. Every word of it was particularly applicable to the young man about to start upon his medical career, as well as to every student of medicine, be he undergraduate or practitioner.

But, gentlemen of the graduating class, one must never forget that this Convocation Day is specially your day, and that you are standing to-day at the portal of your lifework, full of hope and eager expectation. For four years you have been faithfully training for the race which you to-day start upon, and how you will finish it must henceforth depend upon yourselves. The diplomas you have just received and the degree just conferred upon you mean, that in the opinion of your teachers, at least, you have a good working knowledge of disease, and are competent to meet and battle with the various phases of the "ills which flesh is heir to." To continue the simile, we think you are properly trained for the race. But running it is a different matter, and we want to see you win as you should do.

You have still to learn that it is much easier to deal with your patients' diseases than to deal with the patients themselves, to say nothing of their friends and relatives. This

*Delivered at the Convocation for Conferring Degrees in Medicine, held June 9th, 1905.

knowledge each one of you must acquire at first hand for himself; no post-graduate hospital course will give it to you, valuable as such a course is, and much to be desired. You will find even after a hospital course that you have still the larger part of your profession to learn, namely, how to deal properly with your patients and with the social relations that exist between you and your patients. And what a lot this is! What patience, tact and discretion you need! You will appreciate, before you have gone very far, the meaning of these three Latin adverbs which you have just repeated: *caste, caute et probe*. If you merely treat the actual illness of your patients you only fulfil half your mission as a medical man. There are many medical men whose sympathy and advice in trouble is valued by their patients far more than their therapeutic or their surgical skill. Their worth as a friend and adviser to the family is much more than their value as a physician, and they are the very best of practitioners. As the trusted family physician you will know infinitely more of the family secrets than will the clergyman or any other professional man, and never forget what a sacred trust that is, and never thoughtlessly betray it. You are young men, but you will need old heads on those young shoulders if you are to be as successful in practice as we all hope and trust you may be. Success in your chosen profession, I doubt not, is what you are all aiming at, what you all hope to attain and what every one of us wishes you may attain. Let us consider, then, for a few moments the factors that make for success in your future calling.

You enter that profession presumably for two reasons: First, you liked it. If that reason is not first, if that reason is not as strong to-day—nay, stronger—than the day you entered the study of medicine, I beseech you, even now, to abandon the profession. I tell you this in all honesty and sincerity, and after twenty years' constant practice in the profession; for I can imagine no greater drudgery than a man practicing medicine who is not in love with his profession. Secondly, you entered the profession because you hoped—and reasonably so—that you might make in it a fair livelihood, in addition to the honorable position which you might attain. If it is ever true that "the laborer is worthy of his hire," it is most true in the medical profession; and yet the medical man notoriously goes most often without it. In fact, he often labors knowing full well that there is no chance of his being paid for his labor. Nevertheless, if he has the true spirit of

a sworn follower of Æsculapius, he will render those services willingly and cheerfully; better not make the visit at all than to make it grudgingly. All you hope for is gratitude and the sense of a kindness rendered, and you will miss even these if you render an unwilling service.

Now, to make a success of this profession of yours means that you must concentrate all your energies upon your work. Not only must you be in love with your profession, but it must be your only love. You will have to stand by and see those of other professions or business, with possibly with less ability than you have, and with certainly less time and money spent upon their education, apparently passing you in the race of prosperity; but your compensation is that you are doing more good in the world than they are, and where they merely make money you are making life-long friends.

It is a law of the human mind that constant concentration upon one subject will finally produce a mental atrophy. The more constantly you focus your gaze upon a certain thing, the less will you see all sides of it. Herein lies the danger of that very concentration we spoke of just now as necessary to success. You must see to it that your views do not become too narrow. Cultivate some hobby to which in your leisure moments you may always turn. If possible, let the hobby be a medical one; but if not, still have a hobby. I am ashamed to say what mine is—it is not medical.

In thinking over what special message I might deliver to you to-day, it occurred to me, gentlemen of the graduating class, that I might with fitness devote at least a part of my remarks, possibly the major part, to a subject upon which I do feel myself qualified by experience to speak. As many of you know, I spent the first five years of my professional life in country practice, and a glance at our list of graduates shows that at least three-quarters of them become rural practitioners. I therefore think that it might be profitable to you that I should drop a few hints specially applicable to the conditions which pertain in rural practice. Those first five years of country practice taught me much, and I have often said that should any son of mine elect to follow our profession, I would send him, if I could, at the outset into country practice. Nowhere else does the medical man gain such self-reliance. If it is true that "necessity is the mother of invention," then it is doubly true that the necessities and vicissitudes of a country practice develop all the latent resources of the medical student and make him a stronger and a better

man in less time than he ever could be in a large city, where help is so readily and so easily obtained. He must work out his own case in the country; in the city he would not be allowed to do so, a consultant would undoubtedly be called in.

In the first place, I want to state that you will likely acquire a large practice easily and quickly in a country place; and this very thing has been the undoing of many a young medical man. He at once assumes that he is a heaven-born physician or surgeon, else surely he would not, in a few months, have acquired a practice which his poor city brother would spend more years and not obtain. What follows? He decides, without more ado, that he is too good for the place, that he is wasting his talents, moves into a larger sphere, meets com petition, and soon finds his true level. He is no heaven-born practitioner after all, but a fair, average man, and the stupid people in the city do not flock to him. He has thrown away the substance for the shadow, and there is a great danger that he will become soured in his profession and will end in failure, where he might have attained the very greatest success had he just had a little more ballast. That this is no fancy picture many cases which have come to my own personal knowledge testify.

Again, everybody in the country makes it his or her business to know as much as possible about everybody else, especially if the doctor has been called, and as medical men you will have to learn to meet adroitly the cross-examinations to which you will be subjected with regard to the condition of the patients you are attending. And, mark you, any word or hint you may drop will not decrease as it is passed on. In small towns and villages life is not a constant whirl of excitement, it is mostly dull and grey; and there is, therefore, great temptation to go outside your own office to look for some entertainment. You cannot make a practice if you do so. If you are not at home, and a call comes, patients are not going to hunt the whole village or town for you; they will get some one else, as possibly very much time has been lost in driving a long distance to get a doctor. Unless absent at the call of duty, be in your own office. Nothing is so detrimental to the professional standing of the young medical man as the habit of loafing around the town or village, or being seen in the company of loafers.

The code of ethics in country practice differs materially from that which prevails in the town or city, and necessarily so. It is unavoidable that at times you should see the patients

of your fellow-practitioner, and that he should see yours; but it is always avoidable that you should give offence or take offence when this occurs. The medical code is never prejudicial to the interests of the patient; it is always possible to render proper attention to the sick person and proper courtesy to your fellow-practitioner. You must see and treat the patient to whom you have been called casually while on a round miles away from your home; but if that patient has been attended by a fellow-practitioner, be careful to give no opinion of the case, while giving the most careful treatment; and see to it that a sealed note is left to be given to your fellow-practitioner upon his next visit, or, better still, to be delivered to him in the meantime. Thus you will avoid professional complications and make valued friends of the old doctor who may possibly have viewed your advent with mingled feelings. And a word here as to the usual etiquette of country practice. You are supposed to call upon the medical men already in practice when you settle in the town or village. It is a small matter, but it must not be neglected.

Do not spend time trying to dissuade these kindly country folk that they know nothing of medicine and that you know it all; many of their opinions you will find are based upon sound principles, and it will be infinitely better that, where possible, you fall in with the grandmother's views than that you should make yourself unpopular by combatting them. I shall never forget a dear old lady whose grandchildren I was called upon to attend for some painful affection, I forget just what. I was preparing some opiate to be given to these children (for you must do your own dispensing), and the old lady watched me closely and asked what I was going to give. I answered, "A little opium to ease the pain." "Opium!" she said. "You will give no opium to a grandchild of mine; what we always got when we were young and had pain was poppy-head tea." I adopted her suggestion, and she was a very great ally of mine as long as she lived.

As a medical man in a country practice you are of necessity a public man, and you must be prepared to take your part in the municipal government of the town or village in which you reside. In all municipalities the question of public health is a live one, and, thank God, it is becoming daily more so. You medical graduates of to-day, thanks to the generosity of our benefactors, have the opportunity of being well grounded in the knowledge of preventive medicine and of hygiene and public health, and that knowledge should be at the disposal

of the community in which you live. Be always ready to do your part as an intelligent medical man, to the end that the town or village in which you reside should be a more healthy place to live in than it was before. If you are asked to be medical health officer, assume the duties of the position even though the remuneration be pitifully small; as a medical man you owe that much to society. If an epidemic breaks out, place your expert knowledge of how best to combat it at the disposal of the local authorities. Thus you will earn for yourself, often in a few weeks, the gratitude of an entire community, who, though they may say little, appreciate perhaps all the more, and your name will become a benediction in the neighborhood in which you live. What higher aim could any man have in any profession.

But, apart from your public duty as a medical man, it may well be that your sphere of duty may have to be enlarged. You may be of the very greatest service to your neighbors as an intelligent public man, apart from your profession; and I am not one of those who hold that a doctor should not take part in politics, be they local or general; although I do hold most strongly that a man's profession should always claim the best that is in him. Let politics be your hobby, if you will, but not the main aim of your life, so long as you practice your profession.

Never forget what Osler told you about the absolute necessity of the "quinquennial brain dusting." I should rather make it "triennial," and there is no reason, in these days of rapid railway communication, why every country practitioner should not have a rather prolonged holiday at least once in three years, which he might spend in some hospital centre with pleasure to himself and profit to his patients. Country practice is hard work, and no tired, jaded man is capable of doing his best. Work hard while you are at it, but don't be afraid to take a well-earned holiday.

Will you allow me to say one word of warning before I leave this subject? The social life of a country doctor I know is often a lonesome one; if he be a busy man, he is largely debarred from the society of his fellow-practitioners, or of others socially congenial; and I suppose that this is the reason why so often he seeks solace in the waters of Lethe. It is difficult to understand why a man who sees so much of the evil effects of narcotics and alcohol as a physician does, should himself so often fall a victim to these very things. And yet how many most promising medical careers have we seen cut

short by these very agents! It is a painful subject, and one I simply want to mention and not to dwell upon. No one could look unmoved upon the eager, intelligent and hopeful faces I see before me to-day, if he fancied, for one moment, that any one of them might within five years bear a far different stamp. Yet such has beeen the record in the past. I trust such a fate may befall none of you.

And now, gentlemen, I have done with advice. On behalf of your teachers, I congratulate you as a class. You have worked hard; you have worked faithfully and earnestly to attain the proud position you to-day occupy as graduates in medicine of McGill University. Your alma mater is proud of you, and I am sure that no one of you would ever do anything which would cause her to blush for you; but rather as the years roll on, and honors come to you, each in your own sphere, that she will feel that in honoring you to-day, she was but laying up a plentiful store of honors for herself in the future. Universities, like parents, are glorified or disgraced by their children. We, your teachers here during the past four years, wish you all God-speed in your chosen profession, and if at any time you should consider that our advice, help, or sympathy will be of any assistance to you in solving any of the knotty problems of your professsion, I am sure I speak for the whole Faculty when I say that we shall be honored and pleased to give it to you.

Gentlemen—graduates of the class of 1905—on behalf of the Faculty of Medicine, I bid you farewell.

Special Article.

THE DIAGNOSTIC VALUE OF HEMORRHAGIC PLEURISIES.

By DR. NICOLA MORANO.

Having made the diagnosis of exudative pleurisy, we must then find out the nature of the exudate, because on this depend the true diagnosis, the prognosis and the therapy. The direct means for learning this is by puncture, which, besides enabling us to establish the diagnosis, will sometimes start absorption of the exudate. In this paper we shall deal only with *hemorrhagic* pleurisy.

What are the causes of this condition? First of all, we must mention tuberculosis, then malignant tumors, hemorrhagic diathesis, interstitial nephritis, hepatic cirrhosis, acute articular rheumatism, etc. When we have patients affected by scurvy, hemophilia, interstitial nephritis, etc., there is no difficulty in clearing up the cause of the hemorrhagic pleurisy, this symptom being secondary to those of the chief disease. These diseases being excluded, by their special symptoms, we must then diagnose between tuberculosis and malignant tumors of the lungs and pleura—two conditions that often present not only the same clinical, but also the same anatomical and pathological picture.

There is one other condition, sometimes giving rise to hemorrhagic pleurisy, which we cannot now describe in full, namely, certain heart lesions, chiefly aortic in nature, occurring in aged people. In these the pleurisy is limited to the right side, starts without inflammation, is accompanied by grave hyposystole, ceases rapidly as soon as the liquid is aspirated, recurs quickly after temporary improvement, and proves fatal.

Having briefly considered this interesting type, so fully described by Professor Cardarelli, we shall now return to *Tubercular Hemorrhagic Pleurisy.*

This may be due to pulmonary tuberculosis or to primary tuberculosis of the pleura. Dieulafoy has reported cases of hemorrhagic pleurisy occurring both at the onset and during the course of chronic tuberculosis. He makes three groups:

1. Hemorrhagic pleurisy due to acute general tuberculosis.
2. Hemorrhagic pleurisy arising in the course of chronic tuberculosis.

3. Hemorrhagic pleurisy due to a primary tuberculosis of pleura.

Miliary tuberculosis invades generally the whole organism, but there are cases in which the pleurisy is the only symptom which attracts our attention. Its beginning is generally insidious; at other times the pleuritic symptoms are evident. Pleurisy from miliary tuberculosis is not always exudative, it may be dry; but when there is liquid, it is for the most part hemorrhagic.

In chronic tuberculosis, the bacilli are carried through the lymphatic vessels from the apex, where the disease generally begins, to the whole organ; they reach the visceral layer of the pleura, and thence, by *direct contact,* the parietal layer. The bacillus of Koch, having reached the pleura, may have a fibrin-forming influence and set up an adhesive pleurisy; or it may have an irritative influence and cause a fibrino-plastic pleurisy, either dry or sero-fibrinous; or it may produce a vitreous degeneration of the vessels, leading to their rupture and to hemorrhagic pleurisy; or the pleura may be covered with tubercular false membranes, which are continually destroyed in the superficial strata and regenerated in the deeper ones, and as a result we have a purulent pleurisy (Charcot).

Thus the pleurisy arising during chronic tuberculosis is of different kinds, but authorities assert that hemorrhagic pleurisy in these cases is less frequent than in acute miliary tuberculosis.

Finally, it is possible that the hemorrhagic exudate be due to a primary tuberculosis limited to the pleura. Here the anatomical conditions are similar to those of tubercular pleurisy occurring during chronic pulmonary tuberculosis. In these cases there exists no pulmonary tuberculosis, acute or chronic, and the hemorrhagic pleurisy begins as an ordinary acute pleurisy. This pleurisy, after the cavity has been emptied several times, is perfectly cured, but after some months or some years the patient is struck down by pulmonary tuberculosis. Cases of this nature abound in literature. (Hanot.)

Now, in order to decide to which of the three forms the tubercular pleurisy belongs, we must remember the following rules:

In acute tuberculosis, together with the general symptoms of the disease, there is the fact that the exudate is somewhat abundant, and that after thoracentesis it is quickly repro-

duced. Charcot says that pleurisy in this case constitutes only an "epi-phenomenon" of the acute tuberculosis, which follows its rapid and fatal course.

In chronic tuberculosis the pleuritic symptoms appear gradually or abruptly. The exudate reaches two litres or more, and after thoracentesis is soon reproduced, but continues to lose its hemorrhagic tint until it becomes sero-fibrinous. Finally it ceases to be reproduced and the layers of the pleura adhere, while the pulmonary tuberculosis continues its course.

In hemorrhagic pleurisy, due to primary tuberculosis of the pleura, the diagnosis is more difficult. Here the clinical symptoms are only those of the sero-fibrinous pleurisy; so that, in order to decide the nature of the exudate, we must have recourse to injections of tuberculin or to injections of the pleuritic liquid into test animals.

The microscopic examination of the pleuritic liquid is not altogether reliable, because it is nearly always negative.

There is another bacterioscopic method, recently proposed by André Joussett, which seems destined to facilitate the search for micro-organisms, and especially Koch's bacillus, in pathological serums. This new method, successfully applied by Cardarelli, is called Inoscopy, and consists in searching directly (by Gabbet's method) for tubercular bacilli in the suspected exudate, after having digested this exudate, at 38 degrees for about two hours, in a kind of artificial gastric juice, composed of pepsin, pure glycerine, hydrochloric acid, fluoride of sodium and distilled water. In these cases of positive search for bacilli in the exudate, the diagnosis of hemorrhagic exudate from primary tuberculosis of the pleura, is one of the easiest to make and one of the most precise.

Now we shall consider *Hemorrhagic Pleurisy due to Primary Tumors of the Lungs and Pleura.*

In the lungs, besides benign tumors, as lipoma, fibroma, enchondroma and dermoid cysts, which may remain unobserved, one may have malignant tumors, as carcinoma and sarcoma, which are still more frequent than the benign. Usually they are secondary to tumors of other organs, but primary malign tumors of the lungs and of the pleura are not rare, as we used to think. Cardarelli, too, is of the opinion that often sarcoma of the pleura is primary, if not always anatomically, certainly clinically. Literature records to-day numerous cases in support of this thesis, and we owe to the important publications of the Neapolitan school (especially those of Cardarelli and Zagari) the precise data upon which we make a diagnosis of these conditions.

The most frequent site of these tumors is the upper part of the right lung. Like every other pulmonary affection, carcinoma may act as an excitant to the pleura, which may react with an exudate *sanguinolent from the beginning,* owing to the intensity of the inflammation; or with a serous exudate, later becoming fibrinous. Deposits of fibrin are formed on the pleura, and these subsequently become organized and transformed into a very vascular tissue, the vessels of which are easily ruptured, and thus a *hemorrhagic exudate* is produced. (Hermann.)

When a patient has had malignant tumors in other organs, any symptom in the respiratory system naturally makes one think of a possible reproduction. But much more difficult is the clinical diagnosis of a tumor, arising primarily in the lungs or pleura. Even when the pathologist finds in these cases, besides the pleuro-pulmonary tumor, some other organ having malignant nodules of remote date, which may not have given any objective or subjective indication during life, the case is still for the clinician a primary endothoracic tumor.

In some cases, malignant tumors of the lungs and pleura progress without subjective symptoms, but generally the disease begins with a sudden sharp pain, such as is met in pleurisy. On making an examination we find that the exudate is hemorrhagic. On inspection we note that the side of the thorax affected is distended in the upper portion; we find also relative respiratory immobility, with obliteration of the intercostal spaces. Percussion gives a dulness which increases with the amount of liquid, and over the tumor an extreme resistance and lack of elasticity of the thoracic walls. Auscultation reveals a bronchial blowing sound and a loud bronchophony. Both of these arise from the same cause, namely, a pulmonary thickening, by which the parenchyma is reduced to a solid body, more or less compact, which transmits sounds more perfectly.

The sharp, lancinating pains found in these conditions radiate in many directions, to the neck, the shoulder, the arm. There is a remarkable lessening of strength, more marked than in any other affection of pleura or lungs. The cough is peculiar in that it does not relieve the patient; it is strong, violent, and leads to little or no expectoration. Another important sign is hemoptysis, with different features from that in pulmonary tuberculosis. In the latter the hemorrhage is extensive, because it is due to the rupture of large vessels. In cancer, it is much less marked, arising from

small, newly-formed vessels which nourish the tumor. In tuberculosis the blood is red and frothy; in cancer it is black and non-aerated.

Cyanosis is found, being due to the *venous stasis,* arising from compression of superior vena cava or one of its branches. There is also edema, limited to the arm or neck or the upper half of the body. The *cachexia,* when it exists, is a sign which leads us directly to the diagnosis. However, the cachexia is later and less intense than that which is developed in cancer of the stomach or intestines. Even Laennec, in 1818, observed that the general condition of the patient with pleuro-pulmonary cancer is well preserved for a long time. The cachexia is, indeed, very marked towards the end; and particularly when the hemorrhage is great and large quantities of blood are gathered in the pleural cavity.

The pathognomonic objective sign which, in most cases, is sufficient to indicate the presence of a neoplasm, is *glandular enlargement.* The sub-clavicular and axillary glands are the most frequently affected, afterwards the cervical and then the inguinal. This symptom may sometimes precede the manifestation of the pleuro-pulmonary affection, because the tumor may run its course without causing the patient any trouble. They appear only on the side affected. Also there exists no *fever* in these cases. When there is elevation of temperature, it is due to processes outside of the lungs, for example, bronchitis, etc. There is sometimes *frequency of pulse,* due to weakness or to compression of the pneumogastric. This compression may be so great as to cause paralysis or arrest of the heart's action. The tone of the voice may also be changed, becoming hoarse or even aphonic, due to pressure of the tumor on the *recurrent.* To decide that the hemorrhagic pleurisy is due to a neoplasm, we make a physical, chemical and microscopical examination of the pleuritic liquid. The specific gravity is increased (1018 to 1020); it contains a large quantity of albumen (50 per cent.). There is a great residue of solids and an abundance of fibrin. The microscopic examination reveals many red corpuscles, some swollen white ones, enlarged endothelial cells and *elements peculiar to the neoplasm.* Ehrlich, Sorgo and others have found these elements, which, they assert, resemble closely the endothelial cells, but are larger, and, like them, have one or two nuclei.

Conclusions.—Whenever, by an exploratory puncture, we are assured that the pleuritic exudate is hemorrhagic, we must proceed to exclude all those diseases in which it may occur,

the diagnosis of which is easy owing to their special features, such as the hemorrhagic diathesis, hepatic cirrhosis, etc. That settled, we have only to decide whether the hemorrhagic pleurisy is due to a cardiac condition (most frequently aortic), to *tuberculosis*, or to a *primary neoplasm of the pleura*. Ebstein, in 1890, declared that it was not possible during life to diagnose a malignant tumor of the lungs or pleura. Fränkel, in 1891, at the Berlin Society of Medicine, confirmed this statement, and in 1892 he diagnosed a case as tubercular hemorrhagic pleurisy, which, on a histological examination of a cervical gland, proved to be hemorrhagic pleurisy from cancer of the pleura. But this is not all. As Pace has shown, sometimes it is not only during life that it is difficult to distinguish these two forms, but the difficulty extends to the autopsy, and it is for the most accurate histological research to say the last word. The following are the chief differences between tubercular hemorrhagic pleurisy and that from a neoplasm:

Hemorrhagic Pleurisy from Neoplasm.	*Tubercular Hemorrhagic Pleurisy.*
1. The pain in the thorax is sharp, lancinating, persistent, always increasing, radiating to shoulder, neck and arm.	1. The pain is mild, sometimes sharp, but not radiating.
2. The dyspnœa is intense, paroxysmal and lessens after thoracentesis.	2. Dyspnœa is less intense, and may even be absent throughout.
3. Fever is absent.	3. Fever is hectic with night-sweats.
4. Loss of strength is rapid and progressive.	4. Loss of strength is less rapid.
5. Cough, if present, is characteristic.	5. Cough is short and dry.
6. Owing to pressure on the cava or its branches, there is marked cyanosis of the face or arm. The veins of the neck are turgid.	6. The face may be slightly cyanotic from lessened hæmatosis. Turgidity of the veins, if present, is not great.
7. The cervical, axillary and subclavicular glands are enlarged.	7. No glandular enlargement.
8. The percussion of thorax gives a dull, wooden sound, especially in the upper anterior portion.	8. Percussion gives a dull sound, especially in the lower posterior portion.
9. Auscultation gives bronchial breathing, persisting after thoracentesis either extensively or in a limited zone.	9. Auscultation gives bronchial breathing, which disappears after thoracentesis.
10. Pleuritic liquid after thoracentesis is rapidly reproduced, and remains hemorrhagic until death of patient.	10. Pleuritic liquid is reproduced less rapidly, and after being drawn off several times is transformed into fibrinous serum, and may be entirely absorbed.
11. Possible presence of neoplastic elements in the pleuritic exudate.	11. Possible presence of Koch's bacilli.

We must remember, finally, that for the diagnosis of hemorrhagic pleurisy from a neoplasm, there may be found other important data, as the cachexia, the age, changes in voice due to pressure on the recurrent, and deviation of the larynx; while for tubercular hemorrhagic pleurisy there may be all the other symptoms of a pulmonary tuberculosis.—Translated from *Giornale Internazionale delle Scienze Mediche*, by Harley Smith.

Selected Article.

THE TREATMENT OF BALDNESS.

By HENRY WALDO, M.D., M.R.C.P.,
Senior Physician to the Bristol Royal Infirmary and in charge of the Department for Diseases of the Skin; President of the Dermatological Society of Great Britain and Ireland.

Treatment.—Of course, preventive measures are much the most satisfactory. It is sometimes possible to induce hair to grow when the disease has not been too long present, but it is even then more or less unsatisfactory. Assuming that bacilli are present they are then deep in the hair follicle, and we are met with the same difficulty that occurs in tinea tonsurans, and accounts for the subjects of that condition, if they have not very great faith, going the round of the doctors, until the last one gets the credit for the cure, often after the fungus has expended itself. The scalp in the seborrheic condition may look to an ordinary observer quite healthy, and yet there may be very marked funnel-shaped depressions round the hair follicles which are filled with fat. In some cases the seborrhea, as Crocker says, may be limited to these depressions, the surface being clean, and although this cupping of the hair follicles occurs chiefly in severe cases, it may, he says, be partially or completely recovered from.

Now first, as regards washing and bathing. One hears ridiculous nonsense regarding washing the scalp, and especially from the female sex. There are ladies who are proud to boast that they have not washed their heads with soap and water for several months, perhaps years; they little know what an effective disinfectant is ordinary soap, and if it is superfatted it causes very little dryness of the hair. If there are well-marked signs of seborrhea black soap is better, and if combined with spirits of wine and perhaps a little thymol, is a powerful remedy for good, and it should be repeated every day until all signs of the seborrhea have vanished. If it were not for the concentration of hair-producing power in the scalp of women they would oftener be the victims of premature baldness. I think men and women should make a rule of washing their scalps with soap and water at least once a week, and especially after each visit to the barber, as it is here they are likely to become infected from the clipper, or brushes, or other materials. They

should also occasionally soak their own brushes and combs in a 5 per cent. solution of carbolic acid.

An important preventive precaution is to induce an abundant blood supply to the scalp, which can be well carried out by simply moving the scalp upon the skull in different directions with the rough towel after the morning bath. It is well, too, at the same time to rub the ears, as it not only tends to prevent chilblains, but, what is more important, it is said to ward off senile deafness, and it would be interesting to hear what aural surgeons think of this. Bathing, especially in the open sea, is thought to thin the hair, but I imagine that it never does any lasting harm. Much more important is it to warn people with perforated drum membranes that sea water is an irritant to the middle-ear, and that they run a great risk of speedy death from meningitis.

It is thought by some that hard hats are harmful, and especially if they fit tightly. I think, however, it is more important to see that the linings of the hats are clean, but at the same time a hat should not interfere with the circulation or innervation of the scalp, and it is better to have it perforated for ventilation. We were taught years ago that wounds of the scalp always healed easily, as the parts were so vascular, but I suppose that surgeons of the present day have more fear of infection and greater difficulty in ensuring cleanliness in the scalp than in most other parts of the body, as it is such a nursery for germs. It is reported that a London surgeon on one occasion was able to trace a series of post-operative suppurations to a seborrheic house-surgeon, the calamity coming to an end as soon as the seborrhea was brought under control by appropriate treatment. It is thought, too, that seborrheic patients are more prone than others to post-operative suppurations, probably through the agency of microbes retained within the dilated follicles of the skin in spite of the most sedulous cleansing.

When there is any tendency to seborrhea it should be treated with a microbicide, but I am sorry to say not with much hope of curing it, for the tendency to recurrence dies only with the patient. Yet the more immediate complications of seborrhea are readily checked by these remedies. As a palliative then—those who prefer to use some more or less greasy application, I would suggest half an ounce of precipitated sulphur made up with a pint of liquid paraffin, and applied to the scalp every morning: those who prefer a non-greasy microbicide, the same amount of sulphur to a pint of spirits of wine. I should not

prescribe paraffin for females, as the danger of fire has to be thought of, and as a matter of experience ladies dislike putting anything greasy on their heads. People constantly ask for something that will make the hair grow. Well, the view we take is that the old stimulating remedies, even beef-marrow preparations, are unnecessary; for, as a rule, if the microbe and its immediate consequences are removed the hair is nearly always ready enough to grow. A daily lotion of acetic acid and resorcin, made up with eau de Cologne, if you like, and rubbed well into the scalp with a piece of flannel, is as likely as anything else to soak down into the hair follicles without doing any harm. Nascent sulphur lotions are preferred by some, and then hyposulphite of soda and tartaric acid are used separately. Salicylic acid preparations often act well, and so does vasogen iodine. Where there is hyperæmia, other remedies of a more soothing character would be first used.

In conclusion it appears to me that it may become fashionable to advise patients threatened with baldness to try the effect of X-ray treatment, for at the present time it is being used with good results in tinea tonsurans. A considerable discussion took place on this subject at the last meeting of the Dermatological Society of London, and the general opinion seemed to be that the method was now firmly established as the speediest cure for ringworm of the head. Many members had used it in numerous instances, and no member reported any untoward result, though all agreed that the greatest care must be used.—*Bristol Med.-Chir. Jour.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

The Potency Period of Diphtheric Antitoxin.

One of the empirical beliefs concerning curative serums was that the "life" or "keeping" quality of the antitoxin of diphtheria was of short duration. A demand for "fresh" serum has arisen in consequence, and the misconception has gone so far that many physicians have refused to use an old serum, or one on which the arbitrarily-set time limit of the manufacturers has expired. This practice is erroneous, and the theoretical ground on which it is based is fallacious. Incontrovertible proof of this is afforded by the results of careful and prolonged investigations, and the testimony of numerous competent authorities is adducible.

As far back as 1898, Abba, Director of the Municipal Hygienic Institute of Turin, reported experiments to show that antidiphtheric serum retained its potency unimpaired at least eighteen months after preparation. In 1900, McFarland recorded an essentially similar opinion, extending the period of undiminished potency to two years. Chiadini, in 1902, published experimental evidence to show that the antitoxin kept well for at least eighteen months and began to deteriorate a little at the end of two years. A censure being attached to a certain sample of diphtheric antitoxin prepared in the Pasteur Institute because of its alleged deterioration, Roux announced (1902) that preference was given in the Institute to old serums. At this time, also, Libbertz had occasion to reply to a criticism directed against a ten-months'-old serum, and stated that while serums do diminish in antitoxic value, this loss occurs in the first two or three months, and beyond this they can be kept for years without further impairment.

Recently this vitally important problem has been attacked anew with the opportunity afforded by longer intervals since the serums have been procured, and with more uniform testing and retesting. Testimony in favor of the remarkable stability of diphtheric antitoxin is elicited to sustain the views of the earlier investigators. Thus Marx, of the Royal Institute of Experimental Therapy in Frankfort, in which the governmental examination for the German Empire is conducted, after an exhaustive study of 1,138 lots of antitoxin, publishes

his observations in the *Festschrift* in honor of Robert Koch's sixtieth birthday. He shows conclusively that the majority of serums suffer no antitoxic depreciation even after a lapse of from two to five years. The maximum loss of the occasional serum is 33⅓ per cent., and this diminution usually occurs soon after the serum is obtained from the horse. Marx makes this significant statement in concluding his report, "*Any mistrust of old serum is unfounded.*" American serums have been studied by Miller, who tested many samples returned from the market. His results coincide very essentially with those obtained by Marx, and he concludes that "*The demand for fresh serum is not justified,*" and urges that no physician should postpone the treatment of a case of diphtheria awaiting fresh serum, simply because the time limit on that in hand has expired.

With this array of competent scientific authority before us we would be inclined to think the conscientious physician quite justified in discarding old beliefs in this connection without jeopardy to himself or his patients.

These facts, as ascertained by exact scientific research, should disprove obsolete traditions and serve to correct erroneous practices.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

Acid Intoxication of Urine.—Morse, *Archives of Pediatrics*, August, 1905.

By acid intoxication the writer means the presence in the urine of acetone and diacetic acid or the B-oxybutyric acid. The object is to trace a relationship between the presence of these bodies and cyclic vomiting. He summarizes his conclusions as follows: "The acetone bodies are not found in the urine of healthy children by the ordinary clinical tests. They appear in their urine under the same conditions as in adults. Certain disturbances of digestion, associated with the presence of the acetone bodies in early life, have peculiar symptomatologies. It is probable that the peculiar symptoms are due to the acid intoxication. It is also probable that this acid intoxication is secondary. The connection of the symptom-complex seen in many cases of recurrent vomiting with acid intoxication is probably closer than in the digestive disturbances just mentioned. In these cases, also, the acid intoxication is

secondary to some other abnormal condition which may be or may not be digestive in origin. In any event the etiology is obscure. In spite of the fact that the amount of the acetone bodies found in these conditions is smaller than those found in diabetes the demonstration of their presence in connection with symptoms of gastro-intestinal disturbance and the symptom-complex of recurrent vomiting, and probably also with other conditions, is of importance, both in diagnosis and treatment.

Cyclic Vomiting Due to Eye-Strain. — *Archives*, May, 1905. WITT H. SHERMAN, Buffalo.

A lad, five years old, healthy in every respect excepting periodic attacks of vomiting, followed by great prostration. By a process of exclusion, the eyes were considered as a possible cause, and although no symptoms were present they were examined by an oculist, who found that he had a hypermetropic astigmatism in both eyes. Spectacles were ordered and worn for two months. One day his mother noticed dark rings under his eyes, which her experience indicated to be the precursor of an attack. She put him to bed and kept him without food for a day. At the end of that time he was no better, but was depressed, nauseated and ready to vomit. Examination of the glasses showed them to be awry. The glasses were straightened without any other treatment, and in two hours' time he brightened up, his nausea left, and he wanted to eat.

During the past two years there have been several threatened attacks. On each occasion the oculist found that the glasses needed adjustment. When this was done the child was all right.

Two other cases of cyclic vomiting were treated by the author. In one, partial improvement followed the adjustment of glasses; in the other no good result followed.

Congenital Tuberculosis. — *Archives of Pediatrics*, May, 1905. MARTHA WOLLSTEIN.

A woman died in the Lying-in-Hospital of advanced tuberculosis six days after the birth of a male child, in the eighth month of pregnancy. A careful examination was made of the placenta, membranes and uterine cavity. Numerous cheesy areas were found in the placenta, in the chorion and amnion and in the endometrium. Smears from these cheesy areas showed numerous tubercle bacilli. In the autopsy, tubercle were found in the lungs, liver, spleen, kidneys and peritoneum.

Anatomical diagnosis—acute miliary tuberculosis; microscopical examination showed tubercle in the lung, liver, kidney.

Animal inoculation was done from a section of liver. For forty-eight hours after injection the animal seemed ill, but then recovered and seemed lively. A nodule soon appeared at the point of injection and the animal lost weight. This nodule when examined had a softened cheesy centre, smears from which showed large numbers of tubercle bacilli.

Case of Cough and Loss of Weight Due to Worms.—*The Lancet*, January 28th, 1905. By St. Leger Liston.

Boy, thirteen years of age and weighing thirty-six pounds. For many months he suffered from an intense earache, cough, expectoration, night sweats, and great emaciation. Expectoration frequently blood-stained. Temperature 104 deg. F. He also had a distended and painful abdomen, diarrhea, lack of appetite and insomnia. Family history showed that two sisters had died from some vague stomach trouble. Examination of throat showed the head of a round worm wedged into the eustachian tube, and there was great difficulty in pulling it out. After its removal the boy experienced immediate relief. Santonin, calomel and scammony were given for a fortnight, and by the end of that time he had voided per rectum 603 round worms. The cough disappeared, and the patient gained fourteen pounds in weight.

Kidney Decapsulation for Nephritis.—Graham, *Archives*, September, 1905.

After commenting on the fact that most of the cases reported are those of adults, he gives the results of the following cases, collated from the *Journal*: Ten cases reported; four of these died shortly after operation; one not improved; one died in a year from another attack of acute nephritis; one much improved, and three well at present, one a year after operation and two, two years after operation.

Edebohls claims that the improvement is the result of an increased amount of arterial blood. The author attributes it to the relief of tension. He claims that if suitable cases were selected the records would be more favorable in the future than in the past. Chronic interstitial nephritis with arterial sclerosis are not favorable cases for operation. Cases of recent origin, not improved by medical treatment, and becoming progressively worse, are suitable cases. As nephritis is generally bilateral, an operation on both kidneys is usually performed.

Of the ten cases reported by the author, four are possibly completely cured, and as they all otherwise would have died, he claims that the operation is worth a trial.

Editorials.

THE TORONTO UNIVERSITY COMMISSION.

The following gentlemen have been selected as a Commission to report on the reorganization of the University of Toronto: Sir Wm. Meredith, Professor Goldwin Smith, Mr. J. W. Flavelle, Mr. B. E Walker, Rev. Canon Cody, Rev. D. Bruce Macdonald and Mr. A. H. Colquhoun.

The *Globe*, in an editorial, expressed the opinion that the composition of the committee will meet with general approval. After a complimentary reference to Mr. Goldwin Smith, the editor says that Canon Cody and the Rev. D. Bruce Macdonald will represent the dominant thought and opinion of Toronto University men.

We cordially support the views of the *Globe*, which happens to be ably edited by a prominent University graduate. There is a general consensus of opinion that the services of two clear-headed business men like Messrs. Walker and Flavelle will assist the Commission very materially. The Chancellor, Sir Wm. Meredith, was selected as the representative from the University, because of his ability, honesty, and knowledge of University matters. Mr. Colquhoun is a graduate of McGill University, a highly cultured and well-informed man, who is, we think, particularly to act as Secretary of the Commission.

The complete instructions to the Commission are as follows:

To consider and report a scheme for the management and government of the University of Toronto, in the room and stead of the one under which the said University is now managed and governed.

To consider and report a scheme for the management and government of University College, including its relations to and connection with the said University of Toronto.

To consider and report upon the advisability of the incorporation of the School of Practical Science with the University of Toronto.

To consider and report such changes as in the opinion of the commissioners should be brought about in the relations

between the said University of Toronto and the several colleges affiliated or federated therewith, having regard to the provisions of the Federation Act.

To make such suggestions and recommendations in connection with or arising out of any of the subjects thus indicated as in the opinion of the said commissioners may be desirable.

The Premier, in making some remarks as to the object the Government had in view in appointing the Commission, said he wished to emphasize the fact that the Commission has no power to deal with what has occurred in University circles in the past, or, in other words, to investigate the University. The past is a closed book so far as the Government is concerned, and the Commissioners will be expected simply to consider the existing scheme of management and government of the University.

MEETING OF ASYLUM SUPERINTENDENTS.

As mentioned in our last issue, a very interesting meeting of the Medical Superintendents of Asylums in the Province of Ontario was held in the Parliament Buildings, Toronto, September 20th. Dr. McCallum, of London, who occupied the chair, said there were imperfections in the management and equipment of asylums. He considered that the Provincial Secretary, the Hon. W. J. Hanna, deserved praise for calling the meeting, which must result beneficially to the provincial asylums and the officials connected with them. He thought that one of the most important questions for discussion should be the desirability of the appointment of a provincial pathologist. He stated that there were 6,000 patients in the asylums of the province. There should be careful investigation as to the cause of their condition. He also advocated rigorous inspection of the immigrants who are daily entering the province by competent experts in mental diseases. The Provincial Secretary, in a short address, explained that when he entered upon the duties of his office he discovered matters with which he was not thoroughly

acquainted, and he had called this meeting for the purpose of obtaining information. He hoped those present would present their ideas freely. The superintendents must do their part in maintaining the standard of the officials in asylums, and should have the power of suspension of them or even of dismissal.

We quite agree with the Provincial Secretary and earnestly hope that in the near future all incompetent officials will be dismissed. If only those who are thoroughly competent are retained, it is hoped that promotions in the service will be much more common. We have grave doubts, however, whether the Government in their recent appointments took much interest in this aspect of the question, and we repeat what we before said, that in making certain purely political appointments a grave injustice was done to many worthy men.

THE MEDICAL FACULTY OF THE UNIVERSITY OF TORONTO.

Dr. Victor C. Vaughan, dean of the medical faculty of the University of Michigan, Ann Arbor, delivered the opening address for the session of 1905-6, medical faculty of the University of Toronto. Dr. Vaughan has the good fortune to be the head of one of the most progressive medical colleges of this continent. Michigan is generous towards her State university, which has an income of about $900,000 a year, including the revenue derived from the students' fees. Dr. Vaughan has always shown the deepest interest in the welfare of the Toronto medical faculty, and has rendered valuable assistance at three different functions during the last seventeen years. His recent able address, delivered October 3rd, was very highly appreciated by the teachers, students, and many of the friends of the University.

The medical faculty of the University of Toronto has made substantial progress since its re-establishment in 1887. The most important event in its history was the amalgamation of the two medical faculties of Toronto and Trinity

Universities in 1903. As a result of such amalgamtion we have now in Toronto a strong and well-equipped school, which is assisting higher medical education in Ontario. The combined faculty has been managed with great judgment, and may now be considered a provincial success. Two men deserve mention in connection with this happy consummation, Dr. R. A. Reeve and Dr. Algernon Temple.

The prospects for this session are good. There are over 160 freshmen, and a total in all the years of about 600. We are glad to learn that more attention is being paid to the fifth-year class now than in former years. According to the new time-table, which has been prepared, it appears that a fairly good course will be given this session. We think, however, that there is still room for improvement in this regard.

The question is often asked, Is a big school with 600 students better or as good as three schools with 200 each? Any discussion of such a question has become practically useless because, although there was much to be said in favor of the small university or the small college twenty-five years ago, it is now generally admitted that the small institution, unless amply endowed, cannot furnish the expensive equipment which is necessary for the modern teaching of science either in arts or medicine. Hence arose the strongest reasons for federation and amalgamation.

Election of Dr. R. A. Reeve.

The preliminary arrangements for the organization of the various committees for the next meeting of the British Medical Association are well under way. We have much pleasure in announcing, as indeed was generally expected, that at the recent meeting of the Ontario Branch, held in Toronto, Dr. R. A. Reeve, dean of the medical faculty of the University of Toronto, was unanimously nominated as President. This decision was not reached without considerable discussion in a private way. It was considered by many that it would be a graceful act to elect Dr. Temple, dean of the late medical faculty of Trinity College. While we were quite in accord

with any such opinion, we are in a position to state that Dr. Temple positively refused to allow his name to go up for nomination. It was thought by others that it might be well to elect an "outsider," that is, some prominent physician not connected with any medical college. Such a selection of course would have been admirable for many reasons. We have, however, no desire to discuss the situation, we simply desire to congratulate Dr. Reeve upon the fact, that while there were many other men well qualified for so high an office, he became finally the unanimous choice of not only the Ontario Branch, but practically the profession of Canada. His election means much, but it means especially that he will get, as perhaps no one else could, the loyal support of the great mass of physicians in Canada, in his efforts to make the meeting of next August, a pronounced success.

THE NEW HOSPITAL FOR TORONTO.

At an informal meeting which recently took place in the office of Mr. Walker, at the Bank of Commerce, between the Trustees and a number of gentlemen interested, several generous subscriptions were offered, amounting altogether to $255,000. The available fund at present is $977,000, made up as follows:

Mr. Cawthra Mulock	$100,000
Provincial Legislature	250,000
University of Toronto	50,000
City of Toronto	200,000
Mr. Timothy Eaton	50,000
Senator Cox	100,000
The Massey Estate	100,000
Mr. J. W. Flavelle	25,000
Mr. E. R. Wood	25,000
Mr. E. B. Osler	25,000
Mr. Byron E. Walker	10,000
Mr. H. D. Warren	10,000
Mr. Peter C. Larkin	10,000
Lieut.-Col. H. M. Pellatt	5,000
Mr. Frederic Nicholls	5,000
Mr. W. R. Johnston	5,000
Mr. Frank Baillie	5,000
Mr. W. B. Hamilton	2,000

New subscriptions are expected shortly, and it is hoped that the sum total will soon amount to $1,500,000.

TRAINED NURSING.

To the General and Marine Hospital, St. Catharines, Ontario, belongs the distinction of having been the first hospital in Canada to have a training school for nurses established in connection with it.

It was in the year 1873 that plans were laid for the establishing of a training school for nurses in connection with the St. Catharines hospital, which had been founded by Dr. Theophilus Mack in 1865, and which had in the interval risen from a small cottage hospital to be one of the best and most convenient hospitals in the province.

Dr. Mack was untiring in his efforts to promote the usefulness of the hospital, and to his remarkable enterprise is largely due the fact that a training school for nurses was established in St. Catharines long before the larger cities of the Dominion received the innovation, and at a time when nurses' training schools were, indeed, practically unknown on the continent. The large hospitals of Great Britain were known to be training nurses with marked success, and Dr. Mack and those connected with him were eager to introduce into the Canadian hospital the system of hospital training that was proving of such remarkable value in the old land.

Miss Money, an Englishwoman, and the matron of the hospital at this period (1873), was commissioned to go to London, England, for the purpose of bringing out two trained nurses and others willing to be taught to the number of five or six.

It was in the early part of the winter of 1873-4 that Miss Money sailed upon this mission. She returned early in 1874, bringing with her three trained nurses, graduates of Guy's Hospital, London, and by June of the same year the "St. Catharines Training School for Nurses"—afterwards given the name of the Mack Training School, in honor of its founder—was established. It has had an uninterrupted existence ever since, and has, therefore, been training nurses continuously for over thirty years.

During Miss Money's absence in England, Dr. Mack, by the assistance of friends, had been enabled to rent and furnish a house suitable for a nurses' home, and to fund a sufficient sum of money for its maintenance for one year. This house the nurses occupied until a nurses' home was erected on the hospital grounds, which was done in the early years of the training school, so that at no period in its history have the nurses of this institution been required to reside in the hospital building itself.

The London nurses and the early graduates of the St. Catharines school were termed "sisters," which custom, as well as that of the outdoor uniform, was, I believe, adopted in accordance with that of the London hospital, after which the St. Catharines hospital nursing system was modelled. Both these practices were, however, discarded a good many years ago.

The period of training was at first three years; some years later it was changed to two years, but the three-year period was afterwards re-established and is in force at the present time.

Pupils of the Mack Training School have always been required, after a stated period of hospital experience, to each nurse a limited number of private cases outside of the hospital, and the records show that there has been no lack of opportunity afforded them for the exercise of this portion of their training. In the early days when other training schools were unknown in Canada, and, in fact, for many years after training schools had been established in various other places, it was a common, almost daily, occurrence for the St. Catharines school to receive requests for nurses from outside places, not infrequently from distant towns and cities.

Graduates of the hospital have held important institutional positions in this and other countries. Some have labored as army nurses—both in the South African and Spanish-American wars—some have become foreign missionaries, while in nearly all the large cities of Canada and the United States M. T. S. graduates have at some time or other during the last thirty years engaged in private nursing and been welcomed as valued assistants by doctors of the highest standing.

It is not possible to mention individually the work of graduates, but it may be stated in passing that Miss Hibbard, who became lady superintendent of the hospital in St. Catharines, later lady superintendent of Grace Hospital, Detroit, and is now widely known as a war nurse, having been placed in charge of the nursing department of the hospital ship *Maine*, fitted out for service in the South African war, is a Canadian and a graduate of the Mack Training School.

Dr. Theophilus Mack, who founded the General and Marine Hospital and Mack Training School, died in October, 1881.

ANNIE E. HUTCHISON,
(Former Superintendent General and Marine Hospital).

Orillia, September 21st, 1905.

—*Toronto Globe.*

Personals.

Dr. Matt. Wallace is seriously ill from a growth in the abdominal cavity.

Dr. S. E. Fleming, Tor. '95, Sault Ste. Marie, visited Toronto early in October.

Dr. D. A. Clarke, of Uxbridge, has removed to Toronto and settled on College Street.

Dr. George A. Schmidt, formerly of Stratford, is now practicing at Copper Cliff, Ont.

Dr. J. H. Bell has been appointed Medical Health Officer of Kingston in succession to the late Dr. Fee.

Dr. Roswell Park, of Buffalo, attended the International Surgical Congress at Brussels, September 18th.

Dr. John L. Davison and Dr. Harry B. Anderson, Toronto, have formed a partnership.

Dr. E. L. Roberts, formerly of Lynedoch, has removed to Simcoe, and formed a partnership there with Dr. Bowlby.

S. H. McCoy, M.D., M.R.C.S. Eng., of St. Catharines, has been admitted Fellow of the Royal College of Surgeons, Edinburgh.

Dr. O. T. Dinnick, Tor. '03, who has been in New York during the last year, visited his relatives in Toronto, October 6th.

Dr. William Gardiner, of Montreal, has been elected Second Vice-President of the College of Physicians and Surgeons of Quebec.

Dr. W. F. G. Addison, late house surgeon at the T. G. H., has been appointed demonstrator of pathology in the University of Pennsylvania.

Dr. J. Archer Brown and Dr. F. N. Hughes, Toronto graduates of the '04 class, recently returned from London *via* New York, and visited Toronto, October 10th.

Dr. Joseph D. Bryant, of New York, will deliver the annual oration on surgery at the Boston meeting of the American Medical Association next year.

Dr. C. A. Hodgetts, Secretary of the Ontario Board of Health, attended the meeting of the American Public Health Association, recently held in Boston.

Dr. John S. McEachern, formerly of Elmvale, who has recently spent some time at post-graduate work in England, has decided to settle in Calgary, N.W.T.

Dr. E. R. Frankish sailed on October 6th for England, where he will resume his studies in London. Before returning home he will spend a term in the Rotunda, Dublin.

The Western Hospital of Toronto has purchased property on Roseberry Avenue. The grounds of the hospital, which now occupy over four acres, have a frontage of 550 feet on Bathurst Street.

Dr. D. King Smith, 311 Jarvis Street, Toronto, returned from Europe early in October. He announces to the medical profession that he will in future confine his practice exclusively to the diseases of the skin.

Dr. Geo. D. Porter left Toronto for Europe, October 16th. After spending some time at post-graduate work in London and Vienna he will return to Toronto and resume practice, confining himself to dermatology.

James Hyslop has issued a writ for damages for alleged malpractice against Dr. E. Fraser Bowie. He was treated for rheumatism, and alleges that blood poisoning, from which he is now suffering, was caused by malpractice or neglect.

Dr. Bruce L. Riordan, of Toronto, who has been in the G. T. R medical services for eighteen years, has been promoted to the rank of division surgeon of that railway, and will have jurisdiction over the sections west and north of Toronto.

Mrs. Willson, of Newmarket, recently brought an action against Dr. J. H. Wesley, claiming $10,000 damages for alleged malpractice. After hearing the expert evidences of Dr. Geo. Bingham and Dr. Herbert Bruce, the judge gave judgment without allowing the evidence to go to the jury. Chancellor Boyd, after summing up the evidence, completely exonerated Dr. Wesley from the charge of malpractice.

The following have been appointed coroners by the Ontario Government: Dr. Alex. C. Mavety, Toronto Junction, for the County of York; Dr. S. H. Quance, Hagersville, for the County of Haldimand; Dr. W. G. Mackechnie, Marmora, for the County of Hastings; Dr. W. S. Harper, Madoc, for the County of Hastings; Dr. H. H. Alger, Stirling, for the County of Hastings; Dr. W. Glaister, Wellesley, for the County of Waterloo; Dr. J. A. C. Evans, Innisfil, for the County of Simcoe; Dr. F. E. Godfrey, Mimico, for the County of York; Dr. Hiram Wigel, Wiarton, for the County of Bruce; Dr. G. H. Ellis, Chesterville, for the united Counties of Stormont, Dundalk and Glengarry.

Marriages.

Dr. Leonard Vaux was married August 28th to Miss Sparks.

Dr. A. Hamilton Huff, of Wiarton, to Miss Ames, September 20th.

Dr. C. H. Gilmour, son of Dr. J. T. Gilmour, Toronto, to Miss Sayres, October 3rd.

Dr. Thomas M. Allan, of Somerset, Bermuda, was married to Miss Evans, of Toronto, October 5th.

Obituary.

CHARLES EDGAR BONNELL, M.D.

Dr. Bonnell, of Bobcaygeon, a graduate of Victoria in 1866, died August 11th from tetanus caused by an injury to the foot with a rusty nail.

EDWIN W. TEGART, M.D.

Dr. Tegart, of Brantford, a graduate of Victoria in 1859, died September 9th, aged 71.

SALMON FITCH, M.D.

Dr. Fitch, of Halifax, a native of Nova Scotia, who received his medical education in Edinburgh, died September 14th, aged 86.

JOHN A. MACKENZIE, M.D.

Dr. Mackenzie, Assistant Superintendent of the Insane of the Nova Scotia Hospital at Dartmouth, died of appendicitis, October 12th, aged 40.

CHARLES REED CHADWICK, M.D.

Dr. Chadwick, of Boston, one of the most distinguished gynecologists of the United States, was found dead at his summer home, "Chocoma," N.H., September 24th, aged 60 years. It is supposed that becoming ill during the night he walked out on the roof of the verandah, where he fainted, or lost his balance, and fell to the ground.

FRANK BULLER, M.D.

The announcement of the death of Dr. Frank Buller, of Montreal, October 11th, came as a surprise and a shock to his many friends in the various provinces outside of Quebec, most of whom had heard little or nothing of his last illness. He was born in Campbellford, Ont., in 1844, and graduated M.D. from Victoria University in 1869. After spending some time in post-graduate study in England and Germany, and also acting as surgeon in the Franco-Prussian war, he returned to Canada, and commenced practice in Montreal. He possessed great ability and excellent judgment, and was soon recognized as one of the greatest specialists in diseases of the eye and ear in North America. He was also one of the most active and energetic of McGill's professors for something like thirty years. Buller and Osler were very intimate friends, and lived together for many years in the same house. We are told that Dr. Buller's death was caused by pernicious anemia, probably due to cancer of the liver.

STEPHEN LETT, M.D.

After a long illness of about four years, Dr. Stephen Lett, Superintendent of the Homewood Sanitarium, Guelph, died at that institution, of general paresis, aged 58. After completing his medical course in the Toronto School of Medicine he occupied positions in the asylum service in Toronto, Hamilton and London before becoming Superintendent of the Guelph Sanitarium, which position he filled for eighteen years. He was always a faithful and conscientious worker, and took a very deep interest in his specialty. He wrote many valuable articles on mental disorders, alcoholism, and the opium habit.

Apart from his professional career, which was honorable in the highest sense of the word, he was a most estimable man, highly respected and much beloved by all his friends. The sympathy of vast numbers from all parts of Canada is extended to his widow, daughter and son in their bereavement.

THEODORE HOPKINS, M.D.

Theodore Hopkins, M.D., Toronto (Ont.) Medical College, contract surgeon United States Army from 1850 to 1860; during the Civil War surgeon in the army; in active practice for more than forty years, died at his home in Niles, Mich., September 10th, from peritonitis following cholera morbus, after an illness of one week, aged 84.

Correspondence.

"DOC! HELLO, DOC!!" THIS IS FOR YOU.

My Dear Doctor,—

Has it been your misfortune to be called "Doc.," and have you heard such applied to your *confrere?* If so, what were your opinions of the person who thus addressed you? Some one has written that when one is so accosted it points to the next town; in other words, it is equivalent either to contempt or want of respect, either to the profession or to the doctor addressed.

Certainly, no one using it has any respect, either for himself, or the gentleman he addresses as "Doc."; and the doctor who willingly allows himself or his *confreres* to be thus designated is not true to himself or the profession.

You will note that the man who calls you "Doc." is the man who invariably never pays. He is the same fellow who apparently takes great pleasure while speaking to you, in telling what "Doc." Brown, the dentist, and "Doc." Smith, the veterinary, said or did.

Anyway, he apparently considers the doctor, the dentist, and the veterinary on the same level. Such are the views of the ordinary inhabitant of country villages and small towns, who is, as a rule, very unlearned, and the only associates he has are those of the bar-rooms, barber and shoe shops. The one who thus accosts you as "Doc." is, although coarse, thoughtless, disrespectful, and invariably is boastful, of low-bred cunning; the same fellow who ridicules every church interest and even the minister; in fact, he is generally most at ease in the meanest of company, whose scandal of neighbors and obscene language are noticeable and especially attractive. His aim in life is evidently to discourage all good, and drag down all reputatations to such levels in the social scale as he and his fellows —mean by birth and education—so contentedly occupy. That "Doc." is an importation from the United States is, by many observers, thought to be well proven, for among our neighbors there is not that respect among them for those in authority as legislators and those who are engaged in professional work or in practice as among us, and, too, there are so many cheap institutions—now and then designated universities—whose charters and organizations were easily secured by educated swindlers and very weak legislators. In evidence

of the establishment of such so-called, yet really chartered, diploma mills, with the state's sanction to grant every degree, one who has made any study of such work can easily furnish many examples. Chicago has two, if not more, so-called universities, one of which, through correspondence, has given the doctorate in every faculty to many who knew nothing of college life and interests.

To such men who thus procure degrees so cheaply, and of which facts the people so easily learn, the "Doc." may be applied, even if the holders thereof be among the "reverends," as frequently they are, according to well-endorsed reports. When we reflect that more than 5,000 M.D. degrees are annually granted in the U. S., from 155 colleges considered reputable by the Illinois State Board of Health, and that of these colleges, Chicago is named as the home of fifteen, and Missouri the home of an equal number (not including Still's School of Osteopathy, which grants the D.O.), no wonder exists that the supply is greater than the demand, unless it is true that more than one thousand of these M.D.'s abandon medicine before they have seen five years of practice and either engage in some fake medicine or pharmacal business, or engage in some menial occupation where the association is of a very low level, in which the "Doc." element flourishes.

The M.D. degree until very recently in the U. S. has been easily acquired, and so easily that the new or fresh M.D., not meeting with the expectations in practice, does not, or has not, considered the abandonment of practice any great loss if he can run a livery stable, have an interest in a saloon, in fact, engage in any occupation wherein greater financial interests and more promising results may be expecetd. "Doc." is applied to many such men who have left medicine, and I can name many instances, although I cannot recall the name of a Canadian.

Had our universities prescribed the doctorate for what are termed the learned professions, it is evident that the title would (as in olden times) have had its honorable distinction; but, unfortunately, many universities are not too well endowed, and the result is that for the last ten or more years these institutions, in several cheap faculties, have given the doctor's degree to such persons that the dear people think are far from being educated properly. Hence the growing belief that the doctor's degree has not much honorary significance, and thus the "Doc." originally was applied to such so-called graduates and the lowest men even in our ranks; and having

been allowed to be used, it is even applied to any ordinary and honorable member of our profession by the illiterate and degenerate class, as well as by those who should have more respect for themselves. If you then, my *confrere,* can in broad daylight be saluted as "Doc.," and then tamely smile in the face of your personal and professional defamer, it is evident you have degenerated, and it requires but very little study to tell you that, with "Doc." stamped to your name, your best work is ended in Swamptown or Rouges Hollow.

As Jack-the-Ripper, Slippery Bill, or Two-faced Pete, you had better be called than "Doc.," as regards your professional standing, for when "Doc." gets common, you and the hostler, and Sam Jones, the bar-tender, as regards respectability, are a trinity. A post-graduate course will not reinstate you. For the sake of the profession it is advisable to move out of Swamptown, for starvation will rap on your door when you are in.

If lightning strike your home, or you meet with a hold-up in the Big Swamp, your wife's relations visit you too often, and any other ordinary affliction comes, you will survive. Do not worry. But when "Hello, Doc.," "That's all right, Doc.," "Say, Doc.," in fact, any kind of "Doc.," becomes thin, or too thick, it is best to move—even at once, for a tornado, such as they have out West, has struck, or will strike, you amidships, and soon you will be a derelict craft, and no one but yourself need mourn.

VERITAS.

S——; August 17th, 1905.

Book Reviews.

Progressive Medicine, September 1st., 1905. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by HOBART A. HARE, M.D., and H. R. M. LANDIS, M.D. Philadelphia and New York: Lea Brothers & Co. $6.00 per annum.

The last number of this excellent publication is especially rich in good articles. It is only necessary to name the contributors to this volume—Drs. Wm. Ewart, Gottheil, Norris and Spiller—to make certain that the work has been well done. The subjects treated are: diseases of the thorax, dermatology and syphilis, nervous system, and obstetrics.

Manual of the Diseases of the Eye. For students and general practitioners. By CHARLES H. MAY, M.D., Chief of Clinic in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1890-1903; Ophthalmic Surgeon to the City Hospitals, Randall's Island, New York; Consulting Ophthalmologist to the French Hospital and to the Red Cross Hospital, New York, etc. Fourth edition revised. With 310 original illustrations, including twenty-one plates with sixty colored figures. New York: William Wood & Company. 1905.

We have pleasure in acknowledging a copy of the fourth edition of Dr. May's popular text on the diseases of the eye. It is a work we can recommend heartily to those who are possibly unacquainted with it; and to those who know it well, we would say that the book has been thoroughly overhauled, new and excellent colored plates added, illustrating some of the more important external diseases of the eye and changes in the fundus. It is what the author designs it to be, a book upon which a solid foundation may be built.

Practical Massage in Twenty Lessons. By HARTVIG NISSEN, Instructor and Lecturer in Massage and Gymnastics at Harvard University Summer School; Director of Physical Training, Brookline Public Schools; Former Acting Director of Physical Training, Boston Public Schools; Former Instructor of Physical Training at Johns Hopkins University and Wellesley College; Former Director of the Swedish Health Institute, Washington, D.C., etc., etc. Author of "Swedish Movement and Massage Treatment," "A, B, C of Swedish Educational Gymnastics," "Rational Home Gymnastics." With forty-six original illustrations. 168 pages. 12mo. Price, extra cloth, $1.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

While it is impossible to learn the art of properly administering the massage treatment from any volume, it is quite possible to receive instructions in that art, and by following the principle laid down, become proficient by practice. This volume is written by an expert, who has the happy faculty of being able to impart his knowledge to others. We can recommend the volume to the profession, and feel satisfied that its perusal will be to their advantage, as well as giving the greatest amount of benefit to their patients.

Pathology and Morbid Anatomy—Green. Tenth American, revised from the tenth English edition. Revised and enlarged by W. Cecil Bosanquet, M.A., M.D. (Oxon.), F.R.C.P. (Lond.) With a colored plate and 348 illustrations in the text. Philadelphia and New York: Lea Brothers & Co.

Since pathology began to be ranked as one of the exact sciences, Green's text-book has been a standard among students. Although, during the last ten years, many other volumes have been published on the subject, perhaps none are to-day so concise and so helpful to the young man beginning the study of disease. The tenth edition has been brought up-to-date in every particular, and will continue in the lead.

A Manual of Midwifery for Students and Practitioners. By HENRY JELLETT, D.A., M.D. (Dublin University), ex-Assistant Master of the Rotunda Hospital, with the assistance in special subjects of W. R. Dawson, M.D., F.R.C.P.I., H. C. Drury, M.D., F.R.C.P.I., T. G. Moorhead, M.D., and R. J. Rowlette, M.D., with 9 plates and 467 illustrations in the text. University series. London: Bailliére, Tindall & Cox. Canada: Carveth & Co., and Chandler & Massey. Price, $6.50.

Eight years ago Dr. Jellett published his "Short Practice of Midwifery," embodying therein the system of treatment in vogue at the Rotunda Hospital. This little work formed the basis for a second and enlarged edition four years ago, and is still the best part of the present more ambitious work.

The chapter on anatomy is contributed by Dr. Moorhead, Demonstrator of Anatomy in Trinity College, Dublin. We think it a mistake to intrust this important subject to an anatomist. It is an old saying that anatomists do not make good surgeons. We find in this chapter complete anatomical detail; but the information is not presented to the obstetric surgeon in the manner best calculated to aid him in his work.

The description, diagnosis and differential diagnosis of labor are excellent. We disagree with the author in attaching supreme importance to the screw-like action of the pelvic walls on the fetal head in the mechanism of labor; also we think that in describing vertex presentations it would be better to describe the four cardinal positions of Naegelé than to describe two positions and explain the Naegelé equivalent afterwards, as has been done.

In speaking of occipito-posterior deliveries the author says that, "Even if the occiput does rotate posteriorly, eventually, in most cases, labor will end naturally. If it is delayed, extraction with the forceps is not difficult." The writer of this review was guided by this teaching, received at the Rotunda, for some time. Further experience has led him to entirely disagree with the statements quoted, and to strongly advocate

rotation by means of the hand passed through the vagina to the shoulder of the fetus, in all cases which do not progress rapidly.

We are surprised to find that Dr. Jellett advocates the administration of a purgative "in all cases as soon as the first symptoms of labor appear." Our experience of this practice has been that it causes the contents of the bowel and of the uterus to be delivered at the same time, which is extremely unpleasant as well as dangerous. It is much better to administer an enema in all cases at the onset of labor.

We are pleased to note that the practice of twisting the placenta round in order to favor detachment of aftercoming membranes has been abandoned, as experience has led us also to give it up.

We are pleased to find that the intercurrent diseases of pregnancy have been much more fully dealt with than in most works on obstetrics. We think that the author over-estimates the dangers of heart disease in pregnancy. MacDonald's statistics of twenty-eight cases, showing a death-rate of 60.7 per cent., quoted in the text, are certainly misleading. This subject has been much more rationally dealt with in recent years by Wright and others.

In eclampsia we have long since abandoned the milk diet and hot packs advocated by the author, with benefit, we think, to our patients. When forcible delivery is determined upon in concealed accidental hemorrhage, the author prefers Bossi's dilator to Duhrssen's incisions, and in all such cases he plugs the utero-vaginal canal after delivery of the placenta. In accidental hemorrhage, which is not concealed, the well-known Rotunda treatment of plugging is adhered to, justly, we think. The author states that in no case has he found an external changed to an internal hemorrhage thereby.

Primary uterine inertia has not proved so dangerous a condition in our experience as in the author's. The etiology and pathology of the surgical fevers of the puerperium is written by Dr. Rowlette, Pathologist of the Rotunda Hospital, and a good account of the germs which cause trouble is given. We think, however, that the clinical aspect of this subject is more important than the bacteriological, and that more might have been done to aid the obstetrician in his work. No description is given of the premonitory symptoms, and very little aid given in the diagnosis of the different causes which give rise to fever in the puerperium. Repeated vaginal and intra-uterine douching is resorted to before the introduction of the

finger into the uterus. Why not do this at once and remove the cause of the trouble? It is much more effective, and saves valuable time. In streptococcal infection, in which the inside of the uterus is smooth, the author suggests the injection of from two to four drachms of a 20 to 40 per cent. formalin into the uterus. As he does not say that this treatment has stood the clinical test, we think it would have been better to omit it from a formal text-book. The antiseptic advised for the hands, after washing in sterile water or 1 per cent. lysol, is bichloride of mercury, 1:500. The present writer believes this to be an efficient antiseptic, and used it, in common with all the other men, at the Rotunda some years ago. It produced, however, in many of those using it such a leathery condition of skin and dark brown finger nails that he has abandoned it in favor of lysol alone (1 per cent. solution), more recently lysoform, 1:40.

The author still recommends Neville's axis-traction forceps. We used them for some time, but abandoned them because we do not believe them to be true axis-traction instruments; also we think the instrument too large and heavy and the pelvic curve too flat.

Obstetricians owe a debt of gratitude to the Rotunda school for the system of midwifery they have elaborated, and to Dr. Jellett for the clear and careful presentation of it in his "Short Practice of Midwifery." We do not find this last volume an improvement on the first, however. In fact, we think that the increase in size has been at the expense of that clearness which we so much admired in the original book.

The British edition of the present volume is admirable in paper, text and binding, but weak in illustrations, many of which are crude in the extreme. When will Old Country authors and publishers learn the value of accurate and artistic illustrations?

K. C. M.

Selections.

Ammonia Burns of the Eye.

Edward Stieren, ophthalmologist and otologist to the Passavant Hospital, Pittsburg, directs attention to the dearth of information concerning the action of ammonia on the tissues of the eye. There are points of similarity in the action of carbolic acid and of ammonia on the tissues of the eye for the first few days following their introduction; but the author says that ultimately the prognosis regarding the vision of an eye so endangered is quite gloomy when ammonia has done the damage, but much better when the agent has been carbolic acid.

The author recites four cases of injury to the eye by ammonia, in only one of which was treatment effective, and the marked improvement that took place in this case was due no doubt, the author says, to the use of dionin, a new and valuable agent in ocular therapeutics, which has marked properties as a lymphagogue on the tissues of the eye.

Dr. Stieren, on being requested by members of the Medical Society of the State of Pennsylvania to relate his experience with dionin, spoke as follows: "My attention was first attracted to this agent in the summer of 1893, while visiting Fuch's clinic in Vienna, where they used it in cases of corneal opacities, uveitis, infected globes, and painful iridocyclitis. When first instilled, it causes a severe smarting, lasting about a minute, followed by a general edema of the ocular conjunctiva. Usually the pain of an iritis or episcleritis is abolished in a few minutes after its use. I prescribe it in 10 per cent. and 20 per cent. solutions, dusting the pure drug into the eye in the office.

"In regard to lime burns, I cannot recall any at present where the cornea was rendered completely opaque. Usually there is more or less formation of symblepharon with marginal opacity of the cornea. Logically, dionin would be a very useful remedy in lime burns of the eye, as it is an analgesic and has marked properties in promoting the flow of lymph in the anterior portion of the eye."—*Penn. Med. Jour.*, May, 1905.

The Physiologic Action of Dionin.

W. H. Snyder, of Toledo, Ohio, after explaining the pharmacology and the physiologic action of dionin at the recent meeting of the American Medical Association, described a number of experiments bearing upon its action on tissue and

cells. The albino rabbit, medium size, was used; dionin in powder placed in each eye in larger quantities than would be necessary if the eye were abnormal; rabbits killed; globe and tissue enucleated, placed in formalin 4 per cent. for forty-eight hours, and later sections made from cornea. Control specimens were also made from normal rabbits' eyes Pictures of the findings were projected upon the screen, showing the usual signs of general edema, vacuolation of the cells in the epithelial layer, the sections appearing water-logged and hazy. The lymph spaces were changed in shape and dilated. No absorption of cells as in edema of long standing. The surface uneven and the general picture that of edema of the cornea. He concludes that the action of the drug is purely local—greatest where the drug has actually rested; that its most marked action is in eyeballs where the tension is increased; that it has some dissociating action on the intracellular cement substance, allowing a transudation of serum from a globe under pressure; that its analgesic action is explained by its lessening of tension and the well-known action of the derivatives of opium. In iritis with adhesions, plus tension, the use of dionin lessened tension and permitted absorption of the mydriatic with prompt relief of pain and dilation of the pupil. In corneal ulcers the repair process begins as soon as the ulcer is cleared. The more recent the inflammation and higher the tension the better the results. In beginning pannus he had cleared up the cornea and resisted permanent opacity more satisfactorily than with any previous treatment, the lid, of course, being treated for the cause. In glaucoma he preferred it to eserin, relief from pain being very marked, due, he thought, to relief from pressure. In old vitreous opacities he had had poor success.

E. V. L. Brown, of Chicago, called attention to the fact that a recent German investigator had found that dionin did not affect all animals. Experiments had been made with dogs, rabbits, and cats. The cats were not affected at all.

In closing, Dr. Snyder said that the effect was very slight in rabbits, requiring a great deal more of the drug than the human eye.—*Amer. Med.*, Aug. 5th, 1905.

The foundation of the Nurses' New Residence for the Hospital for Sick Children, Toronto, which is now being erected by Mr. J. Ross Robertson in memory of his first wife, was laid October 7th, by Mr. John Sinclair, eldest son of Mr Robertson. It is expected that the building will be ready for occupation about September 1st, 1906.

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Original Communications.

THE RELATION WHICH HYPERTROPHY OF THE VARIOUS TONSILS OF WALDEYER'S RING BEARS IN THE ETIOLOGY OF DISEASE.

By J. PRICE-BROWN, M.B., Toronto.

This ring is composed of masses of lymphoid tissue situated in the pharynx and connected with each other in a greater or less degree by lymph channels. The constituent parts of the ring are the Pharyngeal tonsil of the naso-pharynx; the two Faucial tonsils, located on either side between the pillars of the fauces; and the Lingual tonsil, lying on the posterior fourth of the tongue on either side of the glosso-epiglottic fold and behind the circumvallate papillæ. Owing to the separation into two lateral halves which sometimes occurs in the latter, some writers look upon it as double. The same might be said of the pharyngeal tonsil, but for all practical purposes these are single bodies, and may be considered as such.

Besides these various tonsils, there is also situated within each ventricle of the larynx a minute area of adenoid tissue. But as it requires for physiological purposes the demonstration of the microscope, and has little if any bearing upon the health of the individual, it may logically be left out of the circle of Waldeyer's ring; as also may the small amount of lymphoid tissue which in some instances develops in the middle turbinal region of the nose.

In fetal life the tonsils rarely advance beyond a rudimentary stage, hence at birth the post-pharynx is usually

smooth, the space between the faucial pillars free from glandular enlargement, and the base of the tongue marked only by the normal development of the circumvallate papillæ.

This is the condition usually found, even in cases in which serious hypertrophy of the different tonsils subsequently takes place.

The period of development of the pharyngeal and faucial tonsils is between the first and eighth years, while the lingual tonsil rarely manifests itself to a notable degree until near the period of puberty. Still, in rare instances, both the pharyngeal and faucial tonsils are well formed at the period of birth—a sure indication of subsequent hypertrophy.

The tonsils are physiological structures of a lymphoid character; and when normally developed are essential to the physical well-being of the individual. It is only when they grow to larger than normal size, and the tissues of which they are composed lose their proper balance, that they become a menace to health and demand interference on the part of the physician or surgeon.

Tonsillar tissue is composed of follicles. Each follicle consists of a collection of lymphoid or adenoid cells packed closely together, containing a central endothelial reticulum and forming a unit. These units are grouped together, being separated from each other by a similar endothelial network, consisting of fine trabeculæ of connective tissue elements, containing plasma and lymphoid cells. In the different tonsils these adenoid follicles are variously massed, and are covered by mucous membrane of squamous or columnar character. In the case of the pharyngeal tonsil, ciliated epithelium partially covers the columnar.

On the free surface the mucous membrane is of a compound nature, equal in density to the surrounding mucosa; but in the sulci and invaginations which are present in a more or less degree in all the tonsils—parts that are less exposed to external irritation—the membrane is much thinner, looser in texture and possesses less power of resistance.

In certain points, however, while composed in the main of tissues that are histologically alike, the various tonsils differ from each other in structure as well as function.

The Pharyngeal tonsil, situated on the posterior and superior wall of the naso-pharynx, consists of adenoid tissue held together by fine trabeculæ of connective filaments. It is frequently glomerate, but sometimes racemose, and divided into many segments. When the lymphoid tissue of which it is

composed invades the region of the eustachian tube and the fossæ Rosemüller, it is called the tubal tonsil, although really only an extension of the pharyngeal. The mucous membrane is usually thin and formed of columnar epithelium, superimposed in part by a layer of cilia. This gland in its developed stage is richly supplied with blood. When normal the size is never large enough to interfere with respiration. Development is accomplished by the eighth or tenth year. Atrophy then commences and is complete by the expiry of adolescence.

The pharyngeal tonsil differs from the faucial and lingual in being located in a region that is comparatively free from germ life, the inspired air being filtered of bacteria during its passage through the nasal cavities. The secretions of the numerous glands, of which this tonsil is partially composed, likewise act as a covering to protect against attack from morbific agencies; while the invaginations of mucous membrane, being shallower than those located in the faucial tonsil, are less likely to favor retention and decomposition of any foreign matter that perchance may find a lodgment in the naso-pharynx. These facts refer to the normal pharyngeal tonsil, which pursues its development between the first and the eighth years, and disappears by atrophy during the period of early maturity.

The Faucial tonsils, while coinciding with the pharyngeal in regard to period of development and atrophy, differ from it in several important points. The crypts are wider, deeper, and more numerous. Owing, also, to the oft-repeated action of the pillars of the fauces they favor both secretion and absorption. The loose reticulum in the deep invaginations readily admits the passage of bacteria into the lymph channels. At the same time there is constant exposure to the passage of bacilli of various forms in the act of deglutition, which does not occur in the case of the pharyngeal tonsil.

The Lingual tonsil, composed of a series of rounded elevations or follicles of adenoid tissue, situated on the base of the tongue, rarely develops to any observable degree during child life, being practically absent up to the adolescent period. In it the lacunæ are short and wide-mouthed, and the construction racemose. The mucosa within the crypts being composed of dense, stratified epithelium, there is less likelihood of absorption through its meshes, than is the case in the faucial tonsil. Retention of lacunar contents in it is practically impossible, as the fluids that are so frequently swallowed wash not only the surface but the crypts likewise.

It is not, however, when the lymphoid masses, located in the pharynx and designated tonsils, are in a normal condition that they injuriously affect life, but when they are abnormally developed. It is the presence of hypertrophy that assumes the threatening aspect; and from what has already been said, it is manifest that the effects differ directly with the location of that hypertrophy.

1. Although it may be considered an established rule for the Pharyngeal tonsil in the child to pass through a course of development and atrophy, yet in a large majority of instances the development is normal, creating neither symptoms nor functional disturbances. In the minority, however, both occur, a sure indication that nature has passed her legitimate bounds, and that hypertrophy has occurred.

Many causes may contribute to this effect. Probably constitutional dyscrasia is entitled to the first place. In syphilitic and tubercular conditions, and in hereditary tendency toward lymphatic development, we have primal factors.

As exciting causes, damp conditions of climate, residence in unhealthy localities, constant breathing of impure or dust-laden air, ill-regulated exercise, poor food, defective clothing, may be considered as the chief.

Even when abnormal enlargement or the development of adenoids has taken place, the growth being composed simply of hypertrophy of normal tissue, no systemic injury would result but for the obstruction to respiration which its presence induces. In this, the consequences may be very serious, for it converts the nasal breathing, the only natural method, into the oral. In the former the air is heated, saturated, and purified, while passing through the nasal passages, putting it into a fit condition to enter the lungs; while in the latter, it is dry and often impure when reaching the pharynx and larynx, and as a result is the cause of many forms of irritative disease.

The presence of an enlarged pharyngeal tonsil has also in many instances a serious effect upon aural respiration, as the pressure of a tubal hypertrophy upon the eustachian tube not infrequently so closes its lumen that the air cannot pass through to the middle ear. The result is absorption of the air within the drum, collapse of the drum-membrane upon the ossicles, and, not infrequently, bacterial invasion and suppuration of the middle ear.

As a further result of interference with normal breathing, oxygenation of the blood becomes less perfect and resistance less sustained.

2. In hypertrophy of the faucial tonsils, although the etiology and the period of life are the same as in the development of adenoids, the systemic effects are different. The faucial tonsils possess in much larger degree the power of both secretion and absorption. They admit bacteria freely into their crypts, favoring their passage through the loose connective tissue which separates the follicles into the lymph and venous channels, thus contaminating the blood supply. They are also exposed open-mouthed to the great army of germ life which passes into the primæ viæ during deglutition, a danger that the pharyngeal tonsil escapes. It is possible, too, that the palato-glossal and palato-pharyngeal muscles, which enclose the tonsil, may, during the countless times in which they press upon it, not only aid secretion but favor absorption as well.

It is during the period of childhood that the faucial tonsils assume their greatest hypertrophy, and it is during that period that exanthematous diseases prevail to the widest extent. The question is, What relation does the one fact bear to the other? Is it not due to the innumerable avenues open to the entrance of bacteria through the soft, spongy faucial tonsils? Clinical evidence has proved that children possessing large, soft tonsils are not only more frequently attacked by scarlatina, measles, diphtheria, etc., than are children of a similar age whose tonsils are normal, but that the attacks are much more likely to be of a virulent and fatal type in the one than the other. Do not these facts indicate that the child possessing the hypertrophy has more avenues through which the bacilli can enter the system, and also that he possesses less power of resistance?

In cases of tonsillar hypertrophy extending into adult life, the constant oral breathing renders the tonsils very susceptible to inflammatory action. In these successive attacks of tonsillitis, the crypts, particularly near the proximal ends, are filled with exfoliated epithelial cells, polynuclear neutrophiles, bacteria, lymphoid cells, and in many cases fibrin, resulting in a gradual hypertrophy of connective tissue elements with a tightening of the cryptal orifices. Although the condition may be slow in development, it is progressive, leading to the growth of fibrous tissue at the expense of adenoid.

This may be attended by two results. When the successive inflammatory attacks induce final adhesion of the lacunar orifices, and the outer ends of the cryptal walls, cyst-like cavities are likely to occur in the deeper structures, which may be filled with pathological *debris* and bacteria. When the

occlusion is not complete, saprophytic invasion through what remains of the cryptal orifices is likely to result, with decomposition of the lacunar contents.

Hence, in adult life, the permanently enlarged tonsil is likely to present a hard fibrous surface, whose closed crypts, on the one hand, may be distended by cyst-like cavities filled with putrescent matter, or, on the other, possessed of open cavities with narrow outlets, through which are forced by the action of the faucial muscles foul, cheese-like masses undergoing putrefaction. In either case the decomposing process is the result of prolonged retention, and in either case is apt to produce a condition of physical debility.

It is thus an accepted fact that micro-organisms reach the circulatory system through minute blood-vessels and lymphatics, and that one of the principal avenues of entrance is through the crypts of the faucial tonsil. Hence it is believed that the various bacteria of the exanthemata may enter in this way, as also do the bacillus of Pfeiffer in influenza and the diplococcus in rheumatism.

It follows that when in early life the tonsils are enormously enlarged, with multiplied and deepened crypts, and widely-extended and attenuated mucosa, the dangers of infection are the highest; and the physician should be fully cognizant of the portending result, should he allow such adverse conditions to remain.

3. Hypertrophy of the lingual tonsil differs materially in its effects upon the system from the two already discussed. It usually develops at a period of life in which the pharyngeal and faucial tonsils have not only performed their doubtful functions, but have also passed through their retrograde metamorphosis and disappeared. Quite possibly the presence of a lymphoid cachexia may be an important factor in its development, and it may occur only in individuals who have previously suffered to a greater or less degree from adenoid or faucial hypertrophy; nevertheless, its history and its effects upon the physical system are so markedly its own, that it is worthy of a separate place in the study of the lymphoid ring.

As said before, the lacunæ in the lingual tonsil, even when developed into a condition of hypertrophy, are so short, so widely open, and so freely washed by the oft-repeated swallowing of fluids, that retention of bacteria and decomposition of substances within the crypts cannot very well occur. So that there seems to be little probability of septic infection occurring from retained excreta.

Hence, the evils which hypertrophy of the lingual tonsil give rise to are chiefly of a local character. They consist of a feeling of swelling at the base of the tongue, the presence of mucus in the throat, the sensation of a foreign body in the glosso-epiglottic notch, and disturbance of the normal voice—the last-mentioned being particularly noticeable in the case of singers and speakers.

This category of symptoms and effects, which owe their existence in so large a degree to the presence of hypertrophy in the various segments of the pharyngeal tonsillar ring, clearly indicate the advisability of eliminating, as far as possible, this element in the etiology of disease. While we recognize the fact that these tonsils are in some way necessary to the proper and efficient development of the individual, that they perform some function in the animal economy, no matter how obscure that function may be, we at the same time realize that when hypertrophied they introduce an element of danger that distinctly threatens the well-being and sometimes the life of the patient, and that it is our duty to relieve him of the onus of unnecessary risk.

INTERNAL SECRETION.*

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In presenting these pages which antecedence has dignified with the title of President's address, I wish to refer to some investigations regarding Internal Secretions.

Medical advancement has been accomplished by degrees known as progress and crisis. In the latter may be classed those pivotal moves upon which subsequent action is based. In the warfare of medical science against disease and ignorance, the advance of the scouts and pioneers, revealing newer and stronger positions, discovering fresh sources of strength, retreating from untenable situations, is characteristic of crisis; the following up and seizing these situations by the rank and file is characteristic of progress.

Ambrose Pare's use of the ligature, Harvey's discovery of the circulation of the blood, Laennec's revelations of mediate auscultation, Metchnikoff's theory of leucocytosis, Jenner's teaching of artificial immunity, Morton's and Simpson's discovery of general anesthetics, Holmes' and Semelweiss' recognition of the true character and cause of septicemia in parturition, Lord Lister's advocacy of asepsis are outstanding examples of advance by crisis. No less important, however, is the elaboration of these ideas, the improvement of methods and technique, and the diffusion of this knowledge through medical and lay minds. Nor have these advances been made without great struggle and opposition, often from quarters least expected. It may add to our appreciation of past discoveries and improve our charity towards future ones, to realize the bitterness of criticism, the hostility of attitude, the unreasonableness of scrutiny, to which medical advancement has been subjected.

Semelweiss marked an advance by crisis, but lacked the temperament and strength of character to improve the situation by progress. To the skillful pen and keen intellect of Oliver Wendell Holmes is due the credit of establishing for puerperal sepsis its rightful cause.

The violent opposition he received from those in high as well as those in low positions, drew from his pen this reply:

* President's address, delivered before the Toronto Medical Society.

"My life shall be a challenge, not a truce!
This is my homage to mightier powers,
To ask my boldest question, undismayed
By muttered threats that some hysteric sense
Of wrong or insult will convulse the throne
Where wisdom reigns supreme; and if I err,
They all must err who have to feel their way
As bats that fly at noon; for what are we
But creatures of the night, dragged forth by day,
Who needs must stumble, and with stammering steps
Spell out their paths in syllables of pain?"

This, too, was the attitude of other pioneers of medicine, who have blazed a trail through the pathless forests of unexplained phenomena, who have swept aside the cobwebs of lethargy and indifference, and have brought the lamp of research to dispel the gloom of ignorance. The more intricate field of modern research has been made possible by the activity of the early investigators who have cleared the underbrush, and allowed subsequent students to overturn the soil of empiricism by the plow of rationalism tipped with the share of scientific accuracy and exactness.

The subject, "Internal Secretion," has been chosen not so much for the completeness in its consideration as for the possibilities in its problems; not so much for what it presents as for what it promises.

The subject, however, is an alluring one, and not the least so on account of the extreme difficulty attending the investigation of the character and quality of these secretions.

Cabot, in reviewing the analysis of urine at the Massachusetts General Hospital, and the post-mortem returns, finds that in acute glomerular nephritis there was some *discrepancy* between ante-mortem and post-mortem findings in 93 per cent., while in 75 per cent. the diagnosis of nephritis was not made at all during life. The kidney, moreover, is an organ which secretes abundant material, is the subject of constant study and investigation by thousands of laboratory workers, may be subjected to chemical, microscopical and bacteriological tests, and yet this degree of error is possible. How much greater difficulty surrounds the investigation of glands without a duct, whose secretions can be considered only in contemplation of symptoms produced by the pathology of the organ.

The glands, which are supposed to have an internal secretion, are the thymus, thyroid, pituitary, pancreas, suprarenal, ovary, testicle and less known carotid and coccygeal. Of these, the more important, thymus, thyroid, suprarenal and pituitary, are ductless.

The thymus and thyroid are relatively temporary, the former reaches its maximum size at two years and remains little changed till puberty, then rapidly atrophies. The age of function of the thyroid has been variously placed at from thirty to forty-six years of age.

Recent investigators call attention to the fact that the thymus gland is peculiar in that its structure possesses not only epithelial, but lymphoid tissue. The thyroid, adrenal and pituitary are types of epithelial gland.

Professor Rurah, of Baltimore, from a series of autopsies on infants dying of marasmus, not due to improper feeding or gastro-enteritis, found a reduction from the average weight of 12 grammes in the gland at birth to 2.2 grammes. From these studies Professor Rurah concludes that: (1) Atrophy of the thymus gland is always found in cases of infantile atrophy; (2) the condition of the thymus is an index of the general nutrition of the infant; (3) the state of nutrition in infants may be estimated by microscopical examinations of the thymus at the necropsy. The hypertrophy of the thymus, on the other hand, with prolonged persistence, is followed by sudden and unexpected death.

The pituitary, thyroid and adrenal have been grouped together by some investigators under the comprehensive term, adrenal system, because these glands have a close interdependence and an anatomical and functional relationship. Hitherto mention of disease of the pituitary body has suggested that hyper-nutrition of osseous and muscular structures associated with acromegaly. In a typical case of disease of the pituitary, the subject at death weighed 300 lbs. Heart was 2 lbs. 9 ounces, liver over 7 lbs. The inferior and superior maxillæ the clavicles and sternum were enormously enlarged. There was great kyphosis of spine and enlarged tarsus and carpus. Andriezen concluded that " the pituitary gland exercises a trophic action on the nerve tissues, which means enabling them to take up and assimilate oxygen from the blood stream, and to destroy and render innocuous the waste products of metabolism."

Tamburini, as a result of twenty-four autopsies in acromegaly, found exaggeration of the functions of the pituitary attended the first stage. " The excessive and often ravenous appetite, the thirst, polyuria, the full and hard pulse, cutaneous hyperesthesia, abnormal superficial heat, the typical muscular and osseous hyper-nutrition," all indicate excessive functional activity, the underlying factor we have seen of glycosuria. Sajous regards this organ as the governing centre of the

nervous system, meaning thereby the co-ordination centre of the vasomotor and cranial nerves.

The thyroid too, as well as the thymus, is relatively a temporary gland and degenerates with age. The severity of the symptoms following the removal of the thyroid varies inversely as the age of the subject. The immunity from post-operative myxedema has been variously placed between the age of 30 and 46. The action of this gland has proved a veritable will-o'-the-wisp in investigation. The employment of the extract of this gland in myxedema and its marvellous action was indeed a revelation of the possibilities of organotherapy. This condition of myxedema and criticism was, therefore, regarded as a diminished activity of the thyroid, thus lowering the oxidation processes. Over-activity of the thyroid, on the other hand, by surcharging the blood with this organ's internal secretion will over-stimulate the pituitary, and through it the adrenals, which thereby causes hyperoxidation, the symptom complex of exophthalmic goitre. This theory seemed to bring the explanation of thyroid phenomena within easy grasp, when the removal of these glands in different animals produced such a diversity of results that fresh questions were raised.

Why did removal of the gland in a carnivorous animal result in immediate death? Why did removal of glands in omnivora produce symptoms similar to myxedema in man, and only after a long interval—death? Why was removal in herbivora attended with comparatively insignificant results?

By the discovery of small structures associated with the thyroids and called parathyroid bodies, and so minute as to escape earlier attention, the previous theories vanished, and in the darkness that followed the explanation seemed as distant as ever.

It would now appear that the parathyroids themselves are responsible for the train of symptoms attributed to the removal of the thyroids. If the parathyroids of carnivora are dissected out and the thyroid left intact, the tremors, convulsions, etc., at once follow, while conversely no such symptoms develop if the thyroid is excised while the parathyroids are left. In spite of the diversity of views held regarding the parathyroids there seems to be a consensus of opinion that the gland has an internal secretion which neutralizes a toxic product in the blood. This product produces marked irritation of the muscular and nervous system manifest by tetanus and epileptiform convulsions.

Sajous considers that it is the oxidation factor that prevents the accumulation of the spasmogenic elements.

Verstraeten and Vanderlinden regard this poison as of gastro-intestinal origin, and both they and McCallum, of Johns Hopkins, diminished or abolished tetany by giving a milk or bread and water diet to parathyroidectomized dogs. Kishi, after carefully studying the blood of animals after thyroidectomy, found marked leucocytosis—38,000. He concluded that there was a toxic substance in the blood, probably a nucleo-proteid, which was taken up by the thyroid and destroyed. This toxic substance he believed to arise from the nuclei of meat cells taken into the body as food. The thyroid decomposes this substance into bodies harmless to the animal economy. The neutralization is performed, however, by the parathyroids, and not by the thyroids, as Kishi supposes. Nor does there seem to be any ground for supposing that the parathyroids assume the function of the thyroids. The lesson of modern experiments shows that these glands are quite distinct in function. Graves' disease, then, so far from being caused by enlargement of the thyroid, and this hypertrophied gland charging the blood with an excess of its own secretion, appears rather to be caused by a diminution or atrophy of the parathyroids. In a word, to remove the thyroid alone is to produce myxedema, to remove the parathyroids is to induce a condition similar to Graves' disease, and the very opposite of myxedema.

We may now consider the *pancreas* one of the most important glands as regards external and internal secretion. It has been but twenty years since Bouchardt noted the frequency of pancreatic lesions in persons dying from diabetes. Some four years later the experimental production of diabetes was instituted by von Mering and Minchowski, and followed later by many other investigators. The structures to which such vital changes are due, when diseased, are described by P. Langerhans. These peculiar bodies embedded in the pancreas, are composed of polygonal cells arranged in irregular columns, between which are wide, tortuous, anastomising capillaries. The cells are epithelial in type, and of same origin as ducts and acini, with which in an early period of development they are in continuity. The lumen of the ducts does not penetrate among the cells, and these, therefore, are not concerned in elaboration of pancreatic juice. These resemble the architecture of other ductless glands, as parathyroids, carotid and coccygeal glands, and less closely the pituitary and suprarenal. The intimate relation of the columns of epithelium to rich capillary network has suggested that they furnish some substance to the blood—the hypothetical internal secre-

tion of the pancreas. The experimental evidence of this is furnished by Ssobolen. It is remarkable that slight injury of the pancreas may produce diabetes and that extensive destruction may fail to produce such a result.

The test seems to rest as Opie has shown, not in the change in the pancreas, but the injury to the islands of Langerhans themselves. There are two types of interstitial inflammation affecting the developed pancreas. In the interlobular variety, the inflammatory process is localized at the periphery of the lobule, and implicates the island of Langerhans only when the sclerotic process has reached a very advanced stage.

In the inter-acinar pancreatitis the process is diffuse, invading the lobule and separating individual acini. The inflammatory change invades the island of Langerhans. This reminds us of another remarkable fact, that the security of the individual does not depend on the integrity of the whole pancreas. If one-quarter is left, this as surely and efficiently protects as does the whole pancreas.

It would seem as if the presence of even a very small quantity of secretion from the island of Langerhans were sufficient to stimulate some function of oxidation or combustion. Glycogen has been called the fuel of the body, stored not only in liver and muscle, but elsewhere, and the little islands of Langerhans, with minute quantities of secretion, are sufficient to start the combustion. W. H. Thompson refers to it in these terms: "The interesting researches of Otto Cohenheim show that an enzyme is produced in muscle which, if alone, does not act upon sugar, but when mixed with the secretion of the cells of Langerhans, becomes a very energetic solvent, in the same way that trypsin becomes effective only when joined with kinase ferment in the intestine. This muscle ferment is so energetic when mixed with juice of the pancreas that Cohenheim regards it as quite sufficient to account for the whole process of sugar combustion in the human body under ordinary conditions.

In the action of the adrenal glands, there has been a growing interest since 1855, when Addison, of Guy's Hospital, described a group of symptoms afterwards to be known as Addison's disease.

Interference with the function of this gland, whether by the fibro-caseous lesion of tuberculosis, simple atrophy or an affection of the abdominal sympathetic, produces, in Addison's words, "anemia, general languor and debility, remarkable feebleness of the heart's action, irritability of the stomach and a peculiar change of color of skin." Whether this state is due to absence of a secretion from this gland or an affection of the

abdominal sympathetic, there is still some question. It is now known, however, and daily demonstrated that the suprarenal has an active principle which is able to produce symptoms the opposite of those which characterize Addison's disease.

Adrenalin, the internal secretion of suprarenal gland, is a definite chemical body, and in doses of 1-800 of a grain produces a pronounced arterial contraction. This contraction is due to action of the secretion not on the vasomotor nerves, but on the artery through the muscle of the middle coat. This action on muscle is universal, the striped and unstriped depending on this secretion for their healthy tone.

In 1895 Shafer produced some evidence to show the helpful effect of adrenalin in Addison's disease. From that date to the present, Prof. Thompson, of New York, has had a patient with Addison's disease under treatment with this extract who feels the loss when he fails to take it.

An observation, first recorded by Oliver, and one of great clinical significance, is the marked diminution in bulk of the kidney, as shown by Roy's oncometer, when suprarenal extract is used. The decrease in size to one-half produces, undoubtedly, changes in secretion and elimination of urea.

Wm. Hanna Thompson, who has watched for many years the investigations into the cause of high tension pulse in many conditions of kidney disease, feels convinced that the textural change in the artery is secondary to the tension, that the continued high tension of pulse in nephritis is due to a persistent excess of adrenalin in the blood. This excess, in turn, may be supposed to be occasioned by stimulation of the adrenals by the inflammatory irritation of the neighboring great glands, the kidneys, with which the adrenals are not only topically associated, but may be functionally so as well. The inference is certainly reasonable that a high tension pulse goes with a contracted kidney, and a contracted kidney is *pro tanto* incapable of a normal excretion of urea. If, therefore, the kidney is only functionally contracted, or partially so, from the action on it of some agent in the blood and not too far sclerosed, the administration of an efficient vaso-dilator ought to be followed by an increased excretion of urea. This was the argument, and a test was applied clinically with aconite as the vaso-dilator with the result that the urea excreted increased two, three and four times the amount previous to use of aconite. With the discontinuance of this drug the urea excretion returned to former low level. Along with this there is a like improvement in the other renal symptoms, such as disappearance of casts and of albumin and general rise in the

excretion of solids. This view is strengthened by the experiments of Jorsi, who produced in the course of two months, atheromatous changes in the aorta and large arteries of rabbits by repeated injections of adrenalin. The clinical experience of Dr. W. H. Thompson is so convincing, and the results are of such universal importance, that I have quoted fully from his work, in the hope that equally satisfactory results may be obtained by many others as the opportunity arises.

The cells in the pancreas which produce an internal secretion, are definitely grouped between the tubules, as the islands of Langerhans. The parathyroids appear to have to the thyroids a parallel relation that the islands of Langerhans have to the pancreas. It is believed that a similar relationship exists in the testicle.

The tubules are concerned in the manufacture of spermatozoa, but between these, in addition to connective tissue, framework and vessels, are small collections of cells whose comparatively abundant, finely granular cytoplasm distinguishes them from the stroma cells. To these interstitial cells are attributed the internal secretions of this organ and all the bodily effects consequent upon its production.

In an editorial the functions of the testicle are thus referred to: First, the production of a substance or stimulus that influences certain phases of development, particularly those related to sexual characteristics; that the testicles alone produce this stimulant is amply proved by the results of castration in youth. Second, the manufacture of spermatozoa; third, the production of some substance or stimulus essential to the production of the psychical manifestation of sexual activity.

The usual findings in the examinations of the testicles of cryptorchids, both of man and lower animals, is the absence of the seminal cells, but the presence of the interstitial cells—syncytial cells that lie at the base of the seminal cells. Such individuals develop normally and are possessed of all the attributes of virility, except the possibility of procreation. The ovary, too, had an internal secretion which, similar to the testicle, modifies nutrition. The absence of this secretion produces these nervous and sensory disturbances manifested by the heat flashes and flushes of the natural menopause.

The artificial menopause of oophorectomy with its precipitation of these grave nervous disturbances is familiar to all.

Time and the character of this paper have permitted me but very inadequately to refer to some phases of internal secretions. I have but touched the hem of the extensive subject.

Further researches promise new facts, and with more reliable information the solution of these difficult problems may be attained.

The intellects of centuries have been busy spinning from the experiences and observations of daily life the gossamer threads of knowledge which have been woven into the warp and woof of that fabric which to-day is presented as the finished product of medical achievement. The spirit of the laboratory is identical with the spirit of the clinic, compelling a sustained effort to unveil the mysteries of life and discover the main-springs of its action. It is the spirit of investigation whose voice, with undiminished persistence, repeats over and over as to Kipling's explorer:

"Something hidden, go and find it, go and look behind the ranges!
Something lost behind the ranges! Lost and waiting for you, go!"

PRESIDENT'S ADDRESS.*

By GEO. M. AYLSWORTH, M.D., Collingwood.

Gentlemen,—I would first feebly express my great appreciation of the honor you have conferred by electing me as your chief executive officer, when many younger and more active men were eligible; and then ask you to listen to some of my views (possibly heretical) upon the Relations of Medicine and Surgery.

When surgery is resorted to for relief or cure, it should be an evidence of the failure of medicine's milder measures. Until recently few would subject themselves or their dependents to mutilation, without pressing necessity, lest at some future date grape seeds might take the wrong turning or syphilitic virus escape the cleansing process. The enormous advances of surgery since Lister's propaganda have led to the serious proposal of such surgical interference with the handiwork of God or Nature.

Notwithstanding the brilliant results of recent surgery and the authorities who have said so many hard things regarding internal medication, the fact remains that approximately 95 per cent. of those seeking aid from the profession do not need surgical attention. Surely we have reached the lowest hades of therapeutic pessimism when a prominent Chicagoan can declare in a medical society without being suspended under the rules, we have no remedies that will influence the course of pneumonia. If this cannot be contradicted, in what kind of light must the public regard the rank and file of the profession into whose care such cases fall, and why are we not prosecuted for obtaining money under false pretences for collecting fees for the *treatment* of pneumonia after having once made the diagnosis?

When I was a student, Tanner, the Apostle of Expectancy, was the English writer on practice most in vogue. Although he told us such-and-such medicines might be used in various diseases, about the only clear-cut directions he gave were—confine the patient to bed in a large, well-ventilated room.

With such namby-pamby teachings to the fore, it is not to be wondered at that surgery, under the impetus given it by asepsis, should capture all the members of the profession who had facilities for the work.

These, at first, were few in number, and the work extremely

* Read at meeting of Collingwood District Medical Association.

remunerative, but as the facilities became diffused and the number of operators increased, it became much less so. As early as 1890, when I made one of a series of pilgrimages to New York in search of the latest surgical procedures, I became somewhat intimate with the chief of the out-door surgical clinic in one of the largest hospitals, who had spent many of the best years of his life perfecting his surgery. I spent a month watching him, his two assistants, and a nurse, from 9 a.m. to 1 p.m. each day, performing feats in minor surgery I have never seen equalled, and yet he freely admitted to me that he had great difficulty in maintaining himself, though unmarried. I was then suffering, as I had been for some years, from surgical fever, and can point to work that has perpetuated some lives until now that would have otherwise closed. But this gentleman's experience set all thinking, and when, in 1892, that prince in medicine, born in the south end of this county—Osler—published the first edition of his monumental work, "The Practice of Medicine," he cured my fever for surgery by convincing me that while pathological medicine had kept pace with surgery, therapeutics had been marking time for thirty years, or since the days of Tanner. I thought I saw the direction in which progress was needed and must be made, and thenceforward devoted the most of my energies to the study of therapeutic measures. Pathologists persistently asked what we knew about the action of drugs in disease, and the answer was not forthcoming. So that the long wait, backed by the insistence of great pathological and surgical authorities, constantly forced the therapeutic vessel towards a lee shore with apparently no line to windward.

The germ theory took possession of the whole medical mind, and the surgical section started in at once to utilize the theory by combating microbes, until now, instead of the surgeon having to attack them in their entrenched positions, he has excluded them from his field of work and the microbe has to make the attack. And when a town the size of Collingwood can exhibit such facilities for that work, as may be seen at the General and Marine Hospital, were it not for the element of human error we might pronounce the evil work of the microbe in surgery as a thing of the past. Surgery, however, has not reached its climax, for the heart, lungs, and brain remain to be exploited until all that may be removed and life continue may safely be taken away. The medical section was slower to appreciate the role germs play in disease, and has been less fortunate in the means used in opposing them in its field. This is not surprising, for antisepsis early evolved

the rule—make your incision large enough to enable you to see what you are doing; that is, don't work in the dark.

The surgical fight has been carried on against the microbes in the light, in plain sight outside the body; while in the medical section the fight has necessarily been attempted in the dark, out of sight within the body. Hence the latter's seeming failure, but medicine's golden day is dawning. Surgery's success is pointing the way for medicine, and as it has been estimated that 95 per cent. of the work offering the profession is open for study and rational experimentation by general practicers, and as their patience, persistence and mental acumen average well with those of surgeons, our progress towards therapeutic efficiency should be much more rapid than that of surgery in the past, and the undeserved reproach of collecting fees for useless attendance be promptly removed.

The time limit I have placed upon this paper precludes any general view of the advances in therapeutics occurring even now. But by selecting one disease—say, typhoid fever—an idea may be obtained of the marvellous advances in therapeutics soon to be at our disposal as general practicers in combating disease. When Tanner wrote, typhoid fever had already been differentiated from typhus by Jenner, its treatment by bleeding had been relegated to the limbo of undoubted errors, but the great mass of the profession still used the preliminary purge with calomel or blue mass, followed by black draught. Tanner's instructions which ultimately prevailed, were to confine the patient to bed in a well-ventilated room, give liquid diet, and time, the intestinal flux to be restrained by astringents, and other symptoms to be met as best we could. In college I was taught that purgatives given in typhoid fever might result in a justifiable action for mal-praxis. Believing then, what is now undisputed, that the intestines formed the gateway for the germs, I am one of the minority of practicers who persisted in using mercurials and laxatives in the disease, as a cleansing measure. I used them with fear and trembling because of the weight of authority opposed to them. I thought I often aborted attacks but had not the courage to make the claim, and even now hesitate. The results have been that though I have earnestly tried to remember, I am unable to recall more than two deaths from the disease occurring in my own practice.

In the meantime, advocates of the Brand method made vast claims for its success, but inasmuch as it was never claimed to be radical in its aim, but merely a remedial measure to abate a symptom, I have reserved it to meet hyperpyrexia.

Then Woodbridge and Thistle boldly advocated the adminis-

tration of salts throughout the disease. This was promptly followed by suggestions to use various drugs (carbolic acid, iodine, B. napthol, salicin preparations, etc,), as intestinal disinfectants, and thus destroy any bacilli that might remain. Prominent leaders of the profession opposed the idea on the ground that it was impossible to render the intestinal tract aseptic. In this they were consistent with their conservatism, which demands that they shall oppose any measure originating with the rank and file to a point where they become merely obstructionists.

The general practicers who compose the firing line have persisted until now the daily dose of sulphate of magnesia has become a routine, instead of a rational procedure for many in typhoid. Routine at all times is a disadvantage, but here is injurious, when it induces one to continue administering salines after their good results have been obtained. It seems to me next to impossible that any thoughtful physician is unable to see how rational the administration of purgatives in typhoid is, even though they deny the usefulness of antiseptics. The mere thought of the fetid mass occupying the intestines, forming a nidus for typhoid bacilli, which the expectationist insists shall not be disturbed for fear of hemorrhage and other dire consequences, should make it clear that these eminent authorities having eyes, ears, and noses either do not use them or fail to reason from the evidence of their senses. I respectfully submit that the bad effects of purgatives and disinfectants in typhoid are infinitely less than the bad effects of permitting the enormous expanse of intestinal mucous membrane, whose chief function is absorption, to macerate from day to day in concentrated filth an ideal home for the bacillus of typhoid.

Though I may have earned a reputation for being unorthodox, to which reputation this address may add, I have enough faith in the germ theory to believe that if the intestinal mucous membrane could be made surgically clean early in typhoid and then kept clean, the disease, as we know it, would become extinct.

But what are we to say of or about those eminent authorities who, because the ideal of surgical cleanliness cannot be obtained in the intestines as yet, sneer at the attempts of less prominent men to reach it in typhoid?

It is a relief to know that nothing need be said, therefore nothing will be said, of them, but in the light of results already obtained by the under-estimated general practitioners, the latter may wisely be urged to keep their faces to the sun and con-

tinue the struggle to reach the ideal treatment of typhoid, as well as other diseases.

The measures taken to empty and disinfect the intestinal tract must vary with the indications, and be left to the individual clinician, but the writer would express his preference for the C. P. sulphocarbolates for the latter purpose.

Now that medicine is adapting its therapeutics to the greatest etiological fact involved during the ages, and is stepping out into the light from beneath the shadow of surgery, there should be no envious bickerings, but each should emulate the other that the patrons of the profession may be quickly cured.

Gentlemen, as general practitioners of medicine, I envy you your youth and consequent opportunities.

A STUDY OF CHOREA MINOR.

WITH ANALYSIS OF 173 CASE REPORTS OF PATIENTS TREATED AT THE ROYAL VICTORIA HOSPITAL, MONTREAL.

By ROBERT KING, M.D., Montreal.

The various choreas and pseudochoreas are treated in myriads of articles in many languages. The accounts in text-books and systems of medicine are full and exact to the limit of modern knowledge. Chorea minor is sufficiently common and striking in its manifestations to attract early the attention of the medical student, and in his third year he is well read on the subject, and better satisfied with his knowledge of the affection than he may ever be again. Later he delves deeper and finds that the primary cause is unknown, that the pathology is disputed, and that the treatment is unsatisfactory.

It is with the chorea minor of Sydenham alone that this paper has to do, and no attempt at complete elucidation of the subject will be made. For a history of the evolution of our knowledge of the affection, and for its relation or rather lack of relation to the other choreas, the reader is referred to Dr. Osler's very complete monograph, published at Philadelphia in 1894, and from the same source, or from any modern work on medicine, may be obtained a systematic account of the disease. The object of this writing is, without attempting deduction or argument, to add in concise form to the mass of statistics already available, and the writer is satisfied to leave the interpretation thereof to the seers and prophets of medicine.

The list includes 119 ward cases with full reports, and 54 cases from the out-patient clinic in nervous diseases, necessarily incomplete. Results are given in percentages, and, for the most part, concern the ward cases only. An attempt has been made to eliminate errors by exclusion of variations evidently due to complications.

Chorea is of fairly frequent occurrence in Montreal. The hospital records show one case of chorea to three or four of acute rheumatism. An average of fifteen cases a year, about 1¾ per cent. of the medical cases, have been treated at the Royal Victoria Hospital since its foundation. Very young children are not often affected, or the movements pass unnoticed. There were no patients under four years of age: two were four; two, five. Holt, of New York, has not had a case under four years. In Osler's series of 522 cases, however, 18, or nearly 3 ½ per cent., were four years old or younger. Chorea may well be considered a disease of school

life, or at least of school age, 78.2 per cent. of the present series, over 84 per cent. of Osler's, and nearly 96 per cent. of Holt's cases occurring between the ages of 6 and 15. Ten patients in my series were over twenty years of age; the oldest was a machinist, aged twenty-seven. Osler had thirteen cases over twenty, and of these two were over forty years of age.

Nearly three-quarters of the cases, 73.2 per cent., were females: the preponderance, common to all ages, is vastly greater during the years of puberty. Seven-tenths, 69.2 per cent., were school children, and next in order came housework, with 16.6 per cent.; 84.5 per cent. were Canadian born.

The influence of season on the incidence of chorea is well established, and a chorea tracing for the year shows fairly constant fluctuations, varied probably by differences of weather and climate. Morris J. Lewis, of Philadelphia, has analyzed 717 separate attacks of chorea as regards month of onset, and I find that the curve of the Montreal cases agrees with his in form, and that the highest point in each is reached in March. Thereafter, however, while corresponding rises and falls occur, the months of occurrence do not correspond. Both show a slight fall in April, to rise again in Philadelphia cases in May, and in the Montreal cases in June and July. The lowest point in the Philadelphia series is reached in November, and in the Montreal series in December. The Montreal curve rises gradually through February; the Philadelphia tracing shoots abruptly to its highest point in March. The differences between the curves are less striking than their remarkable similarity.

The association of arthritis with chorea has long been recognized. An English writer, in 1802, gives rheumatism as a cause of chorea, and another, a little later, states that "chorea sometimes alternates with acute rheumatism." A French physician, in 1850, concludes, that of two rheumatic infants, one, at least, will be choreic, and of five choreic children, two are rheumatic. Another French writer of the same period states that articular rheumatism, chorea, and endocarditis are three terms of one and the same pathological state. The Collective Investigation of the British Medical Association shows that a little more than 22 per cent. of cases of chorea have a rheumatic history, and with this the largest collected American statistics closely agree. Jacobi strongly favors the view of the close relationship of the two affections, and Holt says that a large group of cases may be classed distinctly as rheumatic chorea. On the other hand, the earlier German writers and many Americans lay little stress on the occurrence of rheumatic pains

with chorea, and find the percentage of cases in which such association occurs very small. Steiner, of Prague, found only four instances of acute arthritis in 252 cases of chorea. Of 144 cases in which careful inquiries were personally made by Osler, 25, 17 per cent., had had articular pains or swellings, but only six of these had had acute inflammation of joints. In this connection Osler calls attention to the frequently mild character of articular manifestations of rheumatism in childhood, so that the disease may be entirely overlooked until attention is called to it by cardiac complications. Holt regards endocarditis occurring in chorea as a manifestation of rheumatism. The Royal Victoria Hospital reports class chorea among nervous diseases, but, in the wards, its association with the rheumatic group is recognized and emphasized both in teaching and treatment. Of the Montreal cases 22.6 per cent. gave a history of rheumatism, corresponding closely with the over 22 per cent. of the Collective Investigation of the British Medical Association. In 10.4 per cent. of the cases the attack of chorea was preceded by joint pains and swellings, which nearly always passed away when the choreic movements began. This alternation or, as it were, antagonism of chorea and arthritis, the tendency to become manifest at different times, has been recognized and especially insisted on by French writers. In 9.6 per cent. of the present series, however, the choreic attack was accompanied by rheumatic pains. Rheumatism followed chorea in some cases, but statistics from chorea reports in that regard would be misleading, as pains might develop after patients left the hospital cured of the chorea.

In regard to the other members of the rheumatic group, there was a history of tonsillitis in 12.2 per cent. of the cases, but tonsillitis as a complication was not more frequent than in other diseases. Endocarditis was alarmingly frequent: it was fairly well established in 69.6 per cent. of the cases and possible in six other cases. An apical, systolic murmur, transmitted toward the axilla and persistent on repeated examinations, was held, in doubtful cases, to indicate lesion of the mitral valve.

Osler states that there is no disease, not excepting rheumatism, with which endocarditis is so frequently associated. His examination of 140 cases, more than two years after an attack of chorea, showed in 72 signs of organic heart disease. Dana, on the other hand, in his series of 318 cases found endocarditis in 10 per cent. only. The endocarditis is almost invariably of the simple or warty form, but dangerous from the sclerotic changes likely to follow in the valves. The following case illustrates the serious nature of the heart lesions which may follow chorea:

MALIGNANT ENDOCARDITIS FOLLOWING CHOREA PARALYTICA.

J. B., female, aged 13. At five years of age this patient had subacute rheumatism, followed by chorea, and mitral regurgitation was found by Dr. Osler. There were, subsequently, two other mild attacks of chorea. There was no further rheumatism and no tonsillitis. The child appeared robust and was very fond of gymnastics. Her fatal illness began with weakness of the left arm and leg, with slight irregular movements. The condition was pronounced chorea paralytica by Dr. James Stewart. After a fortnight power gradually returned, but slight twitching movements were noticed for three weeks longer. During this time an attack of subacute rheumatism supervened; knees, ankles, and elbows were painful on movement and slightly swollen, but the temperature was never more than one degree above normal. The joint trouble gradually subsided, and had altogether disappeared, when the temperature took on a septic type with rigors, sweating, and weakness, rapidly progressive. A blood culture gave pure staphylococci. Patient died three weeks later. The diagnosis was malignant endocarditis, purpura hemorrhagica, acute nephritis, cerebral embolism.

Scarlet fever is placed with rheumatism by many writers as frequently preceding chorea; there are three such cases in this series. Chorea followed typhoid fever, mumps, and influenza in one case each.

For two-thirds of the cases no cause was assigned. The psychical element is evident from the frequency of fright, worry, or excitement as an inciting cause—15.7 per cent. of cases. There is very slight evidence in support of reflex irritation as a cause; eye-strain was associated in two cases, and pinworms in one. The influence of heredity and predisposition is well shown; 17.4 per cent. of the cases gave a family history of chorea, 26.1 per cent. of them rheumatism. Thirtv-seven per cent. of the cases had previously had chorea; ten had had two previous attacks; eight, three; four, four; and six, several.

The left side was attacked more frequently than the right, contrary to rule but not to reason, for the left side in most people is less developed and less under control than the right. There were five cases of left hemichorea, three of right. In 28.7 per cent. of cases the left side was more affected, as compared with 22.6 for the right. In half the cases no difference between the two sides was noted. Weakness of the affected parts was mentioned in one-quarter, 24.4 per cent. of

the cases; one case of chorea paralytica occurred. Speech was affected in 30.4 per cent. of the cases. There were movements during sleep in 4.3 per cent.

Sensory disturbances occurred in 4.3 per cent. of the cases and were slight.

The superficial reflexes were increased in 11.3 per cent. of the cases; the knee jerk in 30.4 per cent.; the latter was diminished in three cases, and absent in one; in two cases the patellar reflex had the halting character said to be peculiar to chorea.

Irritability is mentioned as a feature in one-third of the cases. Two cases of chorea insaniens occurred; both recovered.

Chorea Insaniens: Recovery.

P.S., female, aged 17. This patient lived at home and was occupied with housework. She had had a former mild attack of chorea, but had not had rheumatism. There was a family history of chorea. A quarrel with a friend was given as an inciting cause of the present illness. The attack began with movements in the right hand, gradually becoming general. There was no mental disturbance for three weeks, then intensification of symptoms with sudden change of disposition. On admission patient was well nourished and of good color. There were constant general choreic movements. She would answer no questions, and resisted examination. The mental attitude was that of a spoiled child of three or four years. The reflexes were greatly increased. There was slight mitral leakage. For the first few days patient hardly slept at all. Later she developed well-marked hallucinations and delusions. At times she was violent. The movements continued during sleep, and she had involuntary passage of urine and feces. The highest temperature recorded was 101.4, with corresponding pulse and respirations. She was in the hospital a month and was discharged cured.

Chorea Insaniens with Hysterical Symptoms, and without Heart Lesion: Improvement.

B. S., female, aged 16. This patient had been nervous but healthy. She had not had rheumatism. It was first noticed that she became childish, irritable, and impatient. Stiffness of the right hand followed. She complained of a ball rising in her throat and choking her, and had attacks of crying and laughing. Two weeks later movements became general, and definite mania with delusions and hallucinations followed.

On admission patient was found fairly well nourished. She

was constantly in motion, tossing herself all over the bed. The heart was extremely irregular in rhythm, but otherwise appeared normal. The mental state was one of abnormal excitement. She held her scapula tightly in her hands, saying that the devils were tempting her to let it go, and that if she were to drop it they would run away with her. She stated that everything in the room looked blue. She cried spasmodically, and, if not restrained, would get out of bed, stagger a short distance, and fall in a heap on the floor. She usually answered questions asked her by her relatives. The knee-jerks were active. The attacks of mania continued during the time she was in the hospital, but there was marked improvement, and the choreic movements ceased. The heart did not become involved and the urine was always normal. She was removed by her friends and was lost sight of.

Except in the maniacal type, and in cases with complications, fluctuations of temperature in chorea are slight. The maximum temperature in uncomplicated cases was 101.4 deg.; the minimum, 95.3 deg. The average maximum was 99.4 deg.; the minimum, 97 deg.

Of complications, endocarditis, as already stated, was present in 69.6 per cent. of cases. Pericarditis was noted only once. Functional murmurs occurred in 13 per cent. of cases. Tonsillitis was not more common than among other patients; it occurred four times. Anemia is mentioned as a marked feature in 19.9 per cent. of the cases; it is of chlorotic type, and in three cases the hemoglobin finding was 55 per cent., 60 per cent., and 70 per cent. Skin eruptions, of which herpes was most frequent, were found in 11.3 per cent. of cases: a little less than half the rashes might be regarded as rheumatic. There was not definite acute nephritis in any case. Albumen was found in two cases and a trace of albumen in fifteen others. A few casts were found in five cases. Sugar was never found.

The following two cases are in the hospital at the time of the present writing. The first supports the view that chorea is an infectious disease allied to rheumatism; in the second the psychical and nervous elements are strongly emphasized.

Chorea with Subcutaneous Nodules.

B. W., female, aged 8. This patient was born in Germany and has only been eight months in Canada. She had tonsillitis three years ago and has had no other disease. The family history is good. The present illness began two months ago with otitis media, followed by joint pains and sore throat. Then

followed movements in the left arm, left leg, and face. Speech was affected. On admission, patient was well nourished. The heart showed mitral stenosis and regurgitation. There was soreness of the joints, and subcutaneous nodules, attached to underlying structures, but not to the skin. The nodules appeared with the onset of the joint pains, first about the ankles, then on the hands and head, in some places in chains, elsewhere irregularly. They remained about a fortnight, were never very hard, and were not tender. Very marked paresis of the left side developed after admission to the hospital; this now shows considerable improvement. There has been no mental disturbance.

Intractable Chorea with Impishness.

P. V., male, aged 14. This boy is small for his age, of fair nutrition, and not anemic. He is a tailor by trade. He had left hemichorea a year ago with marked psychical features. At present there are general movements, somewhat lessened by effort. Patient can hold a glass and drink from it fairly well. There is mitral leakage. The reflexes are active. Patient is very emotional and impish in his actions. He cries and at times causes much disturbance in the ward. He plays pranks, and is a trouble to the nurses and an annoyance to other patients. Improvement is slow.

As regards prognosis in chorea, over 70 per cent. of the ward cases were discharged cured; 26.1 per cent. were improved. Two patients died, both from complications. The average duration of the disease, for 70 cases, was 87 days; the average stay in the wards, for 113 cases, was 37 days.

Treatment.—In the wards 70 per cent. of the cases were cured; 26 per cent. improved. In the out-patient department one was marked cured to seven improved. Allowing for the imperfection of out-patient records, the influence of rest and isolation from friends is evident. It does not appear that there is danger to other children from association with choreics. In one report it is stated that a convalescent choreic again developed movements when another choreic in the acute stage was placed near him in the ward. There is no record of any other patient having been affected in any way by the proximity of a choreic. In 8.7 per cent. of the cases no medicine was used, but these were mild cases. Of drugs, arsenic was given in 75.7 per cent. of the ward, and 68 per cent. of the out-patient cases. Of late, in recognition of the frequent association of arthritis, sodium salicylate has been frequently used.

The comparatively small number of cases, 9.6 per cent., so treated, and the uncertain course of the disease would render comparison at present misleading, but it cannot be said that in any case marked improvement followed its use. Iron was used in a few of the ward cases, and in 24 per cent. of the out-patient cases. In one case apomorphine was found to quiet the patient when the more usual forms of treatment had failed.

In conclusion, the following statements are suggested for consideration:

1. Chorea minor is a functional nervous disturbance of unknown origin.
2. In many cases it shows evidences of infectious character, and of close association with rheumatism.
3. Heart lesions occur frequently and often seriously affect the prognosis.
4. Medicinal treatment is uncertain; early diagnosis and prevention of recurrence important.

FATAL CASE OF VERONAL POISONING.

By T. S. FARNCOMB, M.D., M.R.C.S. (Eng.), L.R.C.P. (Lond.).

As I have not seen any published report of poisoning by veronal in the Canadian journals, I thought, perhaps, a case which has just occurred in my practice might be of interest. On Saturday, October 28th, six p.m., I was called to see Mr. D. E. C., when his wife gave me the following history:

Some two months ago he consulted a physician for insomnia, who gave him some veronal powders. Shortly afterwards, while away on a visit, he, having used all the powders, procured two boxes of veronal, each containing one ounce, which he measured for himself. On Saturday morning, October 28th, he took a dose and lay down, saying that he had had no sleep on the previous night. At noon he was very drowsy and was roused with difficulty. Mrs. C. had to be away during the whole afternoon, and Mr. C. was alone in the house with a little boy, seven years old. On her return, shortly before six, she found Mr. C. unconscious, and the boy told her he had taken another dose of the medicine early in the afternoon. When I arrived he was absolutely unconscious, and it was impossible to rouse him in any way. The temperature was normal, pulse 72, respirations 18, breathing rather deep, but not stertorous, pupils normal in size and reacting perfectly to

light, conjunctival reflex normal, the muscles acted very strongly and spasmodically to electrical stimulation, but this did not rouse the patient in the least from his stupor. Drs. Kidd and Farley were called in consultation. He swallowed perfectly anything that was given him.

October 29th, 5.30 a.m.: Patient could be slightly roused, and said a few words intelligently, but with eyes closed; temp. 99 2-5, pulse 100, respirations 32.

9.30 a.m.: Temp. 101, pulse 110, respirations 32; patient again completely unconscious. Condition continued practically the same all day, except that the temperature rose to 102. A peculiar feature was that, on passing a catheter, no urine was voided, it having to be forcibly expelled by external pressure over the bladder.

Monday, October 30th: Very little change, except that the patient was much weaker. Temp. 101 to 102; pulse 120 to 140; respirations 38 to 42, and more stertorous in character; patient still absolutely unconscious and not swallowing as well.

Tuesday, October 31st: Patient very low; temp. 102 to 103; pulse 160 to 180; respirations 42 to 48; considerable mucus collecting in the throat; commencing consolidation at base of right lung; patient unable to swallow anything. At 11 p.m. the whole right base was solid, and temperature 104. From this time the temperature rose steadily at the rate of 1-5 a degree every half hour until it reached 107 1-5 in the axilla. The patient died at 5.45 a.m., November 1st, without rousing from his stupor in any way.

Trenton, November 4th.

BRITISH MEDICAL ASSOCIATION.

Patron: His Majesty King Edward VII, K.G., F.R.C.P., F.R.C.S.

The seventy-fourth annual meeting will be held at Toronto, Canada, on Tuesday, Wednesday, Thursday, Friday and Saturday, August 21st, 22nd, 23rd, 24th and 25th, 1906.

Programme.

President.—George Cooper Franklin, F.R.C.S. (Eng.), L.R.C.P. (Lond.), Surgeon, Leicester Infirmary, Leicester.

President-elect.—Richard Andrews Reeve, B.A., M.D., LL.D., Dean of University of Toronto Faculty of Medicine.

Chairman of Council—Henry Wm. Langley Browne, M.D., Ch.B., F.R.C.S.E., Consulting Surgeon, West Bromwich District Hospital.

Treasurer.—Hy. Radcliffe Crocker, M.D., F.R.C.P., Physician Skin Department, University College Hospital, London.

An address in Medicine will be delivered by James Barr, M.D., F.R.C.P., F.R.S.E.

An address in Surgery will be delivered by Sir Victor Horsley, F.R.C.S., F.R.S.

An address in Obstetrics will be delivered.

The scientific business of the meeting will be conducted in twelve sections, as follows:

Anatomy and Physiology.—President: Professor Bertram Coghill Alan Windle, M.D., F.R.S., Cork. Vice-Presidents: Dr. A. B. Macallum, Toronto; Dr. Alex. Primrose, Toronto; Dr. J. Wesley Mills, Montreal; William Frederick Haslam, F.R.C.S., Birmingham. Hon. Secretaries: Dr. C. B. Shuttleworth, Toronto; Dr. Gawnshaw Cleland, Toronto; William Barnet Warrington, M.D., 69 Rodney Street, Liverpool.

Dermatology.—President: Norman Walker, M.D., Edinburgh. Vice-Presidents: Dr. Graham Chambers, Toronto; Dr. Harry B. Anderson, Toronto; Dr. James Galloway, London; Ernest Solly, M.B., Harrowgate. Hon. Secretaries: Dr. D. King Smith, Toronto; Dr. Donald MacGillivray, Toronto; John Campbell Rankin, M.B., 38 University Road, Belfast.

Laryngology and Otology.—President: J. Dundas Grant, M.D., London. Vice-Presidents: Dr. George R. McDonagh, Toronto; Dr. H. S. Birkett, Montreal; John Macintyre, M.B., Glasgow; Hugh Edward Jones, M.R.C.S., Liverpool. Hon. Secretaries: Dr. David James Gibb Wishart, Toronto; Dr. Geoffrey Boyd, Toronto; Francis James Steward, M.S., 133 Harley Street, London.

Medicine.—President: Sir Thomas Barlow, Bart., K.C.V.O., M.D., London. Vice-Presidents: Dr. Alex. McPhedran, Toronto; Dr. James Stewart, Montreal; Alex. Napier, M.D., Glasgow;

Wm. Calwell, M.D., Belfast. Hon. Secretaries: Dr. Robert D. Rudolf, Toronto; Dr. John Taylor Fotheringham, Toronto; Robert Hutchison, M.D., 22 Queen Anne Street, London, W.

Obstetrics and Gynecology.—President: A. H. Freeland Barbour, M.D., Edinburgh. Vice-Presidents: Dr. J. Algernon Temple, Toronto; Dr. Adam H. Wright, Toronto; Dr. Wm. Gardner, Montreal; T. Arthur Helme, M.D., Manchester. Hon. Secretaries: Dr. Frederick Fenton, Toronto; Dr. Kennedy C. McIlwraith, Toronto; Dr. Cuthbert Lockyer, 117a Harley Street, London, W.

Ophthalmology.—President: Robert Marcus Gunn, F.R.C.S., London. Vice-Presidents: Dr. Geo. Herbert Burnham, Toronto; Dr. John W. Stirling, Montreal; Joseph Nelson, M.D., Belfast; Arnold Lawson, F.R.C.S., London. Hon. Secretaries: Dr. James M. MacCallum, Toronto; Dr. Duncan McLennan, Toronto; Frank Pearson Sheffington Cresswell, M.B., Cardiff.

Pediatrics.—President: George Alexander Sutherland, M.D., London. Vice-Presidents: Dr. H. T. Machell, Toronto; Dr. Allen M. Baines, Toronto; Otto Jackson Kauffmann, M.D., Birmingham; Donald John Armour, F.R.C.S., London. Hon. Secretaries: Dr. G. Stanley Ryerson, Toronto; Dr. Joseph S. A. Graham, Toronto; Ralph Vincent, M.D., 1 Harley Street, London, W.

Pathology and Bacteriology.—President: Professor J. G. Adami, M.D., F.R.S., Montreal. Vice-Presidents: Dr. J. J. Mackenzie, Toronto; Dr. W. T. Connell, Kingston; Dr. Ingersoll Olmsted, Hamilton; Professor Robert Fraser Calder Leith, M.B., Birmingham. Hon. Secretaries: Dr. Gideon Silverthorn, Toronto; Dr. Harold C. Parsons, Toronto; Charles Powell White, M.D., London.

Psychology.—President: Wm. Julius Mickle, M.D., London. Vice-Presidents: Dr. N. H. Beemer, Toronto; Dr. Charles K. Clarke, Toronto; Chas. Caldecott, M.B., Redhill; Landell Rose Oswald, M.B., Gartnavel. Hon. Secretaries: Dr. A. T. Hobbs, Guelph; Dr. Goldwin Howland, Toronto; William Frederick Farquharson, M.D., Garlands, Carlisle.

State Medicine.—President: Dr. F. Montizambert, Ottawa. Vice-Presidents: Dr. Charles Sheard, Toronto; Dr. Peter H. Bryce, Ottawa; Hon. Dr. Pyne, Toronto; Sydney Monckton Copeman, M.D, F.R.S., London. Hon. Secretaries: Dr. J. Langrill, Hamilton; Herbert Timbrell Bulstrode, M.D., London.

Surgery.—President: Professor Irving H. Cameron, Toronto. Vice-Presidents: Dr. Fred LeM. Grasett, Toronto; Dr. Francis J. Shepherd, Montreal; Dr. A. B. Atherton, Fredericton, N.B.; Dr. T. K. Holmes, Chatham, Ontario. Hon. Secretaries: Dr. H. A. Beatty, Toronto; Dr. Frederick C. Marlow, Toronto; Sinclair White, F.R.C.S., Ranmoor, Sheffield.

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Editorials.

CARE OF THE FEEBLE-MINDED.

At a session of the Conference on Charities and Correction, at the Normal School, Toronto, November 14th, a discussion took place on the work of the associated charities in relieving the deserving poor. At the same session Dr. Helen MacMurchy delivered an address on "The Care of the Feeble-Minded." She pointed out the fact that the number of mentally defective was increasing, and that institutions so far established failed to reach the milder classes, which really called for special attention, because those included under this class enjoyed the same freedom as healthy members of the community, and that their tendency to over-breeding added materially to the mentally defective.

It was desirable that homes adapted to the various grades among the mentally defective should be established. Among the most fruitful causes of such conditions were low morality, deficient nutrition in early life, tuberculosis, alcoholism and the employment of married women in factories.

The records of insanity and the statistics of maternity homes were in many respects startling. She reported one case where a patient entered the maternity hospital for her ninth child, and the superintendent reported that the eight other children were all mentally defective. With proper organization the Government would have stepped in at the first and prevented the addition to its population of the other eight children. It was a matter of economy, as experience proved that $100 expended in one generation saved at least $1,000 in the next.

THE OLD GENERAL HOSPITAL OF TORONTO.

The hospital trust is at present negotiating with the Government regarding a new Board to be established, and over matters in connection with the management of the new hospital, which is shortly to be erected.

We learn from an interesting historical memorandum, issued by the trustees, that in the early survey of York, 399 acres of land were set apart by the Crown for the purpose of a general hospital. At the close of the War of 1812 the sum of $20,000 was given to the Hospital Board by the Royal and Patriotic Society which had been organized to provide for the widows and orphans of those who had fallen. The first hospital was built in 1819, on a block of land lying between King, Adelaide, John and Peter Streets. Owing to the burning of the Parliament Buildings in 1824, the Government occupied the hospital. In 1829 it reverted to its original purpose, and was opened for the reception of patients.

When it was found about twenty years afterwards that land in this vicinity was becoming very valuable, the old hospital property was sold, and the present site on Gerrard Street was acquired, and a new hospital was erected and opened in 1854. In August, 1868, the hospital was closed on account of lack of funds to carry it on, but was reopened in August, 1869.

All the land originally given by the Crown has been sold in order to provide buildings and equipment, with the exception of certain small and valuable properties in different parts of the city, which are still held by the trustees, and the rentals are applied towards the maintenance of the hospital.

THE LODGE DOCTOR.

We learn from one of the Peterborough newspapers that an interesting event occurred in that town at the regular meeting of the Lansdowne Lodge, S. O. E., when Dr. Young, the lodge physician, was presented with a gold ring in recognition of his services, and especially of the stand which he took in the Medical Association, when the proposal was made to abolish lodge practice. The following address was read at the same time: "Dear Sir and Brother,—We, the physicians and members of Lansdowne Lodge, Sons of England, wish to express our gratitude to you for the kind attention, and for the consideration which you have shown to the members and to the lodge as a body during the time you have held the office as lodge

physician, and particularly during the last few months, when if it had not been for the stand taken by you, we, as well as other societies of like character, should have been deprived of the services of a lodge physician, and the great work for which we are banded together would have been greatly hindered, and we as members put to much inconvenience." This address was signed on behalf of the lodge by two of its members. Dr. Young, in acknowledging the gift, thanked the donors for the honor which they had done him, and expressed his deep appreciation of the kindness of his fellow-fraternalists. This is an example of what has so frequently happened in this country, when physicians have endeavored, by banding together, to do away with lodge contract practice. While we have to acknowledge that, according to the customs which prevail both in the older countries and on this continent, lodge practice should not be considered disreputable, still we agree with the majority in thinking it would be better for both the public and the profession if it were abolished.

VERONAL POISONING.

The report in this issue of a case of fatal poisoning by veronal comes as a surprise, if not a shock, to those who considered this drug harmless. Dr. Farncomb, in a private letter, expresses the opinion that druggists should be prohibited from selling any such drug in bulk to the laity. We certainly concur and believe, at the same time, that the laws of Ontario place restrictions on the sales of poisonous drugs, which should cover such a case as this.

Veronal is one of the compounds of alcohol with urea, of which the most commonly known is urethane (ethyl carbonate). We learn from Sir Lauder Brunton that veronal is a diethyl-malonyl-urea, which in doses of 7 to 15 grains appears to produce refreshing sleep. In the discussion which followed the reading of Brunton's paper at the last meeting of the British Medical Association, the opinion was expressed that veronal was both useful and harmless as a hypnotic. Numerous favorable opinions as to this drug have been published in Germany

Holland, England and the United States during the last two years. We are told by Massey and Drappur that patients have taken up to 135 grains in one dose without exhibiting alarming symptoms.

It is stated that its hypnotic effect is due to its paralyzing influence upon the central nervous system, which in the case of small doses manifests itself by a deep sleep, and with large doses by prostration. We had formed a high opinion of the drug as an effective hypnotic, which in small doses was safe even in cases of cardiac insufficiency, phthisis, and renal affections. Dr. Arthur Wright gave two doses of 15 grains each in one night to an athlete who was suffering seriously from an injury received on the football field. This is the largest dosage we have known in Toronto. It is to be hoped, however, that we shall all learn from Dr. Farncomb's report that in large doses veronal causes great prostration and sometimes death.

INTERNATIONAL MEDICAL CONGRESS.

The Fifteenth International Medical Congress will assemble at Lisbon, Portugal, during the week from the 19th to the 26th of April, 1906. The official language of the Congress will be French, but in the general sessions as well as in the meeting of sections, in addition to French, English and German will be made use of. There will be in all seventeen sections.

The Secretary-General is Professor Miguel Bombarda, of Lisbon, to whom all communications regarding the reading of papers may be addressed.

Most of the countries will be fully represented at the Congress through national committees. For the United States Dr. John H. Musser, of Philadelphia, is President, and Dr. Raymon Guiteras, New York, is Secretary.

The Executive Committee of the Canadian Medical Association has appointed Dr. A. McPhedran, Toronto, as President, and Dr. W. H. B. Aikins, Toronto, as Secretary for Canada, to act in conjunction with the International Committees of the Congress.

Physicians resident in Canada who expect to attend this Con-

gress should put themselves in communication as soon as possible with either of the above named. "To travel in Portugal, a knowledge of French is preferable to that of other languages," so writes Prof. Bombarda, but he adds that it is the intention, however, to render everything easy for the visiting physicians, so that they may fully profit by attendance at the Congress.

Under the business management of Messrs. Thomas Cook & Son, two trips are being arranged for. The first provides for a direct trip from New York, leaving Saturday, April 7th, by North German Lloyds S. S. for Gibraltar, with a short visit there and also at Seville, in addition to the stay in Lisbon during the session of the Congress.

The second trip is for the party to leave New York by the S. S. "Barbarossa," on Saturday, 31st March, due to arrive at Gibraltar on Monday, April 9th, with visits to Tangier, Granada, Cordova, and Seville, arriving at Lisbon on Thursday, April 19th, and after the Congress by way of Madrid and Barcelona to Paris and New York.

We understand that the delegates who attended the last Congress in Madrid, with Cook's personally conducted party, had an excellent service. Among those going from the United States are Drs. McMurtry, Senn, Griffith, Vander Veer, Mathews, Murphy, Wood Fassett, Morris, Hughes, Turck, Guiteras, and several others.

Personals.

Dr. J. W. Lord has commenced practice at Davidson, Sask.

Dr. P. H. Bright, formerly of Wiarton, has removed to Drayton.

Dr. W. G. Rieve, formerly of Huntsville, is now practicing at Arthur.

Dr. James Webb, formerly of Sault Ste. Marie, has removed to Niagara Falls.

Dr. W. J. Boynton, formerly of Cannington, is now practicing in Pefferlaw.

Dr. W. A. Sargent, formerly of Springbrook, is now practicing in Coldbrook.

Dr. Forest, of Toronto, has removed from Parliament Street to 660 Markham Street.

Dr. E. C. Beer, of Brandon, Man., was married to Miss McWater, September 21st.

Dr. J. A. Duncan, who practiced for a short time in North Dakota, has settled in Elora.

Dr. W. L. Coulthard, formerly of Rossland, B.C., has removed to Vancouver, B.C.

Dr. Norman McLeod visited friends on Crescent Road about the middle of November.

It is announced that Dr. Donald McGillivray, of Toronto, is engaged to be married to Miss Helen Nelson.

Dr. H. R. Elliott, having formed a partnership with Dr. J. Crawford, is now practicing at Niagara Falls.

Dr. Ambrose Stanton has been chosen Senior House Surgeon for the Greenwich Hospital, London, England.

Mr. A. A. Beemer, son of Dr. N. H. Beemer, Mimico, was married October 25th, to Miss Muirhead, of Toronto.

Dr. J. W. Bruce Smith, of Toronto, has been elected president of the Toronto Society of Associated Charities.

Dr. D. P. Kapelle, of Hamilton, is now taking a post-graduate course at Johns Hopkins Hospital, Baltimore.

Dr. S. P. May has retired from the position of Provincial Inspector of Libraries, after holding that office for thirty years.

Dr. J. T. Duncan, of Bloor Street East, has recovered from his recent severe illness and is again attending to practice.

Dr. Brefney O'Reilly, surgeon to the SS. *Ifafa,* was at Delagoa Bay, Africa, October 2nd, and expected to reach London about November 20th.

Dr. W. J. Bell, who was surgeon of the C. P. R. SS. *Empress of India,* for nearly three years, has retired, and is now engaged in private practice.

Dr. Charles O'Reilly, of Toronto, after visiting Dublin and various cities in the south of England, is now in London, and expects to return home about the last of December.

Dr. George W. Badgerow, after over two years a resident medical officer of the Throat Hospital, Golden Square, London, Eng., has resigned and will return to Toronto early in December.

Mr. J. W. Flavelle, Rev. Canon Cody, Rev. Bruce Macdonald and Mr. Colquhoun, of the University of Toronto Commission, visited the Chicago, Ann Arbor and Wisconsin universities about the middle of October.

Rev. Andrew S. Grant, M.D., of the Yukon, who has for years been engaged in missionary work in the far North, as well as medical work in the General Hospital at Dawson, has a six months' leave of absence, and is now visiting friends in Ontario.

Dr. W. B. Thistle, of Toronto, was married October 25th, to Miss Hazel Wright, niece of Mrs. Jno. S. Willison. After a trip of three weeks to the cities of Washington, Philadelphia and New York, Dr. and Mrs. Thistle returned to Toronto, and are living at 171 College Street.

The following have been appointed coroners: Dr. Hy. H. Moorehouse, of Toronto, for Toronto; Dr. Jno. A. Macdonald, of Markham, for York; Dr. James B. Coleridge, of Ingersoll, for Oxford and Middlesex; Dr. Austin H. Speers, of Burlington, for Halton; Dr. Peter B. McGibbon, of Bracebridge, for Muskoka; Dr. Arthur E. Ranney, of North Bay, for Nipissing.

Obituary.

JAMES HERBERT AUSTIN, M.D.

Dr. Austin, of Toronto, died at his home, 129 Bedford Road, November 5th. He graduated from the University of Toronto, and also from the University of Trinity College, in 1893, and took the double qualification of M.R.C.S., Eng., and L.R.C.P., Lond., in 1894. In the latter year he contracted pneumonia, after which he suffered from fibroid phthisis up to the time of his death. He visited California about ten years ago, and then settled in Dryden, Texas. After practicing there he returned to Canada and was incapacitated for work for some years before his death. He was possessed of admirable qualities, and was highly respected by all who knew him,

THOMAS CLARKE, M.D.

Dr. Clarke, a well-known physician of St. Catharines, died suddenly of apoplexy, Nov. 5th, aged 76. He was very active for many years as a physician, and also took a keen interest in public matters. Several years ago he contested Lincoln County unsuccessfully in the Conservative interest against the late James Norris.

WM. E. SMITH, M.D.

Dr. Smith, of St. Thomas, Surgeon to the Michigan Central R. R. (Canadian Division) for 28 years, died Nov. 8th, aged 68. He was graduated from Victoria University in 1863.

HERMON LEVI COOK, M.D.

Dr. Hermon Cook, of Toronto, died of pneumonia Nov. 16th, aged 74. He practiced at one time in Brighton Village. and then removed to Napanee. He gave up the practice of medicine about 23 years ago and engaged in life insurance business. He was graduated from McGill University in 1854.

Leslie, the two-year-old daughter of Dr. T. F. McMahon, of Toronto, was killed Nov. 10th by a piece of furniture which she pulled over.

Mrs. Heggie, wife of Dr. David Heggie, of Brampton, and mother of Dr. W. C. Heggie, of Toronto, Dr. Norman Heggie, of Florida, and Dr. D. L. Heggie, of Brampton, died suddenly Nov. 20th, aged 60.

ITEMS.

The Toronto Home for Incurables is now known as the Toronto Hospital for Incurable Diseases. The change in name was made in order that the institution might participate in the distribution of the Provincial Government grant to hospitals.

Miss Paton, superintendent of Grace Hospital, Toronto, has adopted certain suggestions made by the American Society of Superintendents of Training-Schools for Nurses, in consequence of which a nurse's time will be divided as follows: Eight hours of practical work in the wards, eight hours for sleep and recreation, and eight hours for study.

The authorities of the Toronto General Hospital are creating a new ward out of the residence of the former Medical Superintendent, Dr. O'Reilly. This ward, when equipped, will be devoted to the treatment of patients suffering from nervous trouble. Provision has also been made for attendance on patients suffering from pulmonary tuberculosis who come to the Out-Patient Department daily for treatment. Miss Mitchell has been detailed as a special nurse to visit the homes of such patients and teach the families how to care for them. This excellent arrangement has been made possible on account of two gifts of $500 each from Mr. W. J. Haney, one of the trustees, and another gentleman well known for his work among the poor sick of Toronto.

The first regular meeting of the Collingwood District Medical Association was held in the Council Chamber, Collingwood, on October 24th, 1905, and was a decided success, not only in point of number of members being present, but also the interest taken in the discussion of the papers presented. The programme consisted of: The Presidential address, Dr. Aylsworth, Collingwood; "History of a Case of Pyosalpinx," Dr. Pearson, Stayner: "The Ills of Clothes," Dr. Shaw, Singhampton; "Adenoids," Dr. McFaul, Collingwood; "Specimen Cystic Tumor of Ovary, complicating Pregnancy," Dr. McKay, Collingwood.

Book Reviews.

Examination of the Urine. By G. A. DE SANTOS SAXE, M.D., Pathologist to the Columbus Hospital, New York City. 12mo volume of 391 pages, fully illustrated, including eight colored plates. Philadelphia, New York, London: W. B. Saunders & Company. 1904. Flexible leather, $1.50 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

Dr. Saxe has presented a work on examination of the urine unusually complete, absolutely up to date, concise, yet explicit in all its parts; and it will be found to meet fully the requirements of the student and practitioner without burdening him with unnecessary analytic procedures. Special attention has been paid to the interpretation of findings as applied to clinical diagnosis, and the student is told what each chemical element and each microscopic structure means when found in the urine. The character of the urine in various diseases is also described in detail, Descriptions of technic have been made very explicit, and the author has inserted some new methods of working developed in his own experience. Cryoscopy and other means of functional diagnosis have been given their proper places. The text is fully illustrated, including eight colored plates of the various urinary crystals. The work will be useful because it is practical.

The Principle of Bacteriology. A practical manual for students and physicians. By A. C. ABBOTT, M.D., Professor of Hygiene and Bacteriology, and Director of the Laboratory of Hygiene, University of Pennsylvania. Seventh edition, enlarged and thoroughly revised, with 100 illustrations, of which 24 are colored. Lea Brothers & Co., Philadelphia and New York. 1905.

The new edition of this well-known work contains the latest knowledge in the ever-changing subject of bacteriology. Dr. Abbott is master of a style clear and concise, as becomes scientific diction, but at the same time most charming and readable. His book on this score has no equal in the English language, and is the very thing the busy practitioner is looking for. The chapter on infection and immunity is especially worthy of commendation.

Introductory Physiology and Hygiene. By A. P. KNIGHT, M.A., M.D., Professor of Physiology in Queen's University, Kingston. Toronto: The Copp, Clark Co.

This little book is well printed on good paper and substantially bound. We are delighted to see it. It presages more attention to this important subject. It will certainly be a boon to teachers. The method followed, that of experiment and observation (laboratory method), is the right one; the arrangement is good; the book is divided into four parts for

pupils in the First, Second, Third and Fourth reading books respectively, but is intended to help the teachers in preparing the lessons for class work, not for pupils' use at all. We are glad that a lesson has been inserted on "Milk," but we do not quite agree with the author about pasteurizing milk. Everything about the stable, cow, milker and utensils should be so clean that pasteurizing would be unnecessary. The illustrations, from original photographs, are excellent.

The Physician's Visiting List (Lindsay & Blakiston's) for 1906. Fifty-fifth year of its publication. The dose table herein has been revised in accordance with the new U. S. Pharmacopœia. Philadelphia: P. Blakiston's Son & Co. (successors to Lindsay & Blakiston's), 1012 Walnut Street. Sold by all booksellers and druggists. Price: the 25 patient visiting list, with one page for each week of the year, $1.00. The 50 patient visiting list, with two pages for each week of the year, $1.25. The same in two volumes, $2.00. The 75 and 100 patient visiting list in two volumes, $2.00 and $2.25 respectively.

The small visiting list for twenty-five patients per day or week to hand. A remarkably small, neat and handy pocket-book, with much valuable information in the way of tables, etc., in the front part of the book. Cordially recommended.

A System of Physiologic Therapeutics. A practical exposition of the methods, other than drug-giving. Useful for the prevention of disease and in the treatment of the sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College; Physician to the Jefferson Medical College Hospital, and to the Philadelphia, Jewish and Rush Hospitals, etc. Volume VII.—Physical Education, including Massage and Exercise, by JOHN K. MITCHELL, M.D. Volume VIII.—Rest, Mental Therapeutics, Suggestion, by Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College of Philadelphia. Philadelphia: P. Blakiston's Son & Co.. 1012 Walnut Street. 1905.

Volume VII. of this excellent system of physiologic therapeutics is confined to mechanotherapy and physical education. Attention is drawn to the bloodless method of reducing congenital dislocations of the hip, as practiced by Professor Lorenz, of Vienna. The article on exercises, as a method of physical education, has been given a special place in order to emphasize the therapeutic views advanced by Dr. Gulick, especially as to the corelation between the development of the race and that of the individual, and the necessity for guiding the individuals on evolutionary and historical lines. Attention is directed to the great harm that may result from following the advice of those who undertake to order the physical activities of persons whom they have never seen, and whose therapeutic needs they would be unable to recognize even upon personal examination. The dangers and even fatal effects caused by heart strain in this matter are illustrated.

Volume VIII. deals with rest, mental therapeutics and suggestion. We note that in the preparation of the section on hypnotism free use has been made of the works of Bernheim, Tukey and Hirsch. These two volumes, in every respect, are quite in keeping in utility with those which have already been mentioned in review.

The Diagnostics of Internal Medicine. A Clinical Treatise upon the Recognized Principles of Medical Diagnosis, prepared for the use of students and practitioners of medicine. By GLENWORTH REEVE BUTLER, Sc.D., M.D., Chief of the Second Medical Division, Methodist Episcopal Hospital; Attending Physician to the Brooklyn Hospital; Consulting Physician to the Bushwick Central Hospital; formerly Associate Physician, Departments of Diseases of the Chest and Diseases of Children, St. Mary's Hospital, Brooklyn, N.Y.; Fellow of the New York Academy of Medicine; Member of the Medical Society of the County of Kings; Fellow of the Society of Science, Letters and Art (Lond.), etc. With five colored plates and two hundred and eighty-eight illustrations and charts in the text. Second revised edition. New York and London: D. Appleton and Company. 1905.

The first edition of this work was fully reviewed on its appearance in this journal, and it is with pleasure we observe that a second edition, owing to the popularity of the work, has been so soon demanded. In the revision of this book care has been taken to add a considerable amount of new and important material without unduly increasing its bulk. The illustrations are exceptionally good, both from the standpoint of clinical accuracy, as well as in the artistic sense.

Simon's Manual of Chemistry. A Guide to Lectures and Laboratory work for Beginners in Chemistry. A text-book especially adapted for Students of Medicine, Pharmacy and Dentistry. By WILLIAM SIMON, Ph.D., M.D., Professor of Chemistry in the College of Physicians and Surgeons of Baltimore, and in the Baltimore College of Dental Surgery, etc. New (8th) edition, thoroughly revised to conform with the eighth decennial revision of the U. S. Pharmacopœia. In one octavo volume of 643 pages, with 66 engravings, 8 colored plates representing 64 important chemical reactions, and 1 colored spectra plate. Cloth, $3.00 net. Philadelphia and New York: Lea Brothers & Co., 1905.

This remarkably comprehensive and compact presentation of chemistry answers the needs of all who are concerned in any way with the medical bearings of the science—teachers, students and practitioners of medicine, pharmacy and dentistry. As a teacher of long experience the author knows the three cardinal points: how to present a subject, what to include, and what to omit. His work has been a conspicuous favorite from the start, entering an overcrowded field, and winning its way to a record of eight large editions, most of them in several printings. Thus the author has had frequent opportunities of revising it thoroughly to date and eliminating any less important matters to gain space for those of greater moment without overstepping the limits of convenience in size and modera-

tion in price. This new edition is revised to accord with the new U. S. Pharmacopœia. Every page has been scrutinized and whole chapters rewritten and rearranged to conform with the most modern views. The ingenious series of colored plates have always proved great favorites. They show the actual colors and color changes of 64 of the most important tests used in inorganic and organic chemistry, poisoning, urinary examinations, etc., etc. It is a work which the student will carry with him into practice and which pharmacists, dentists and physicians will find most convenient for reference.

Dietetics for Nurses. By JULIUS FRIEDENWALD, M.D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and JOHN RUHRAH, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. 12mo volume of 363 pages. Philadelphia and London: W. B. Saunders & Co., 1905. Cloth, $1.50 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

This book has been prepared to meet the needs of the training-school and to serve as a ready reference book for the nurse when on a case. The essentials of dietetics are given in a concise, clear manner, and the physiology of digestion has been carefully reviewed. The subjects of infant feeding and the feeding of the sick have been fully discussed, and a brief outline has been given of the principles involved in the nourishment of patients suffering from the various diseases in which diet plays an important role in treatment. A very useful feature consists in the extensive diet lists, with instructions, enabling the nurse to comprehend and intelligently to carry out the orders of the physician. Altogether, it is an excellent little work indispensable to the well-trained nurse.

A Treatise on Diagnostic Methods of Examination. By PROF. DR. H. SAHLI, of Berne. Edited, with additions, by FRANCIS P. KINNICUTT, M.D., Professor of Clinical Medicine, Columbia University, N.Y.; and NATH'L BOWDITCH POTTER, M.D., Visiting Physician to the City Hospital and to the French Hospital, and Consulting Physician to the Manhattan State Hospital, N.Y. Philadelphia and London: W. B. Saunders & Co., 1905. Octavo of 1,008 pages, profusely illustrated. Cloth, $6.50 net; half morocco, $7.50 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

The distinguished author considers all methods of examination for the purpose of diagnosis, and also gives admirable explanations of clinical phenomena from physiological as well as pathological points of view. The examinations of the stomach, sputum, feces, urine, and blood are exhaustively treated. There is an article from the pen of Dr. Theodore C. Janeway giving a brief review of the investigations of American and English observers upon the value of the clinical esti-

mation of blood-pressure, with a description of some newly devised instruments. Some of the new features in the chapter on urine examination are: Seliwanow's reaction for levulose, Bial's test for pentoses, and quantitative determination of urochrome after Klemperer. Osmotic pressure and cryoscopy of the urine are also discussed at length, and a description is given of Liebermann and Posner's method of staining urinary pigments. In the chemical examination much attention is directed to describing methods; and this is done so exactly that it is possible for the clinician to work according to these directions. The nervous system has been very elaborately detailed, giving unusual space to electrical examination. The American edition of this great work contains all the material of the now fourth German edition. Many new illustrations have been added by the editors.

Saunders' Pocket Medical Formulary. By WILLIAM M. POWELL, M.D., author of "Essentials of Diseases of Children"; Member of Philadelphia Pathological Society. Containing 1831 formulas from the best known authorities. With an Appendix containing Posological Tables, Formulas and Doses for Hypodermic Medication, Poisons and their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetrical Table, Diet List, Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc. Seventh edition, revised. Philadelphia and London: W. B. Saunders & Co. In flexible morocco, with side index, wallet and flap. $1.75 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

It is not surprising to us that Saunders' Pocket Medical Formulary, which has reached its seventh edition, should have attained such popularity, for we know of no similar work containing so much useful, practical, and accurate information in so small a compass. In this new edition there have been added over 460 new and valuable formulas, selected from the works and private practices of the best authorities. The editor has shown discretion in the elimination of many obsolete formulas, inserting in their place newer and better ones, embodying a large number of approved new remedies.

A Text-Book of Diseases of Women. By BARTON COOKE HIRST, M.D., Professor of Obstetrics, University of Pennsylvania. Second edition, revised and enlarged. Octavo of 741 pages, with 701 original illustrations, many in colors. Philadelphia and London: W. B. Saunders & Company. 1905. Cloth, $5.00 net; sheep or half morocco, $6.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

This book is written on the same lines as Hirst's "Text-Book of Obstetrics," to which it may be called a companion volume, and we predict for it a similar success. The palliative treatment of diseases of women and such curative treat-

ment as can be carried out by the general practitioner has been given special attention, enabling physicians to treat many of their patients without referring them to a specialist. Throughout the book great stress has been laid upon diagnosis and treatment, and the section devoted to a detailed description of modern gynecological operations is most clear and concise. In this second edition the revision has been thorough, introducing, however, only matter that promises or has been demonstrated to be of permanent value. Forty-seven new illustrations have been added and thirty of the old ones replaced, the work now containing a collection of seven hundred and one beautiful original illustrations, many of them in colors. We take much pleasure in recommending Dr. Hirst's work to the medical profession generally.

Radiotherapy in Skin Disease. By Dr. J. Belot. With a preface by Dr. L. Brocq, Physician to the Broca Hospital, Paris. Translated by W. Deane Butcher, M.R.C.S., Surgeon to the London Skin Hospital. Only authorized translation from the second French edition. With thirteen plates and twenty-eight illustrations. London: Rebman Limited, 129 Shaftesbury Avenue, W.C. New York; Rebman Company, 1122 Broadway. Toronto: C. E. Wingate, 2 Richmond Street East.

In looking over the work on Radiotherapy, the first sentence in the preface strikes one: "Radiotherapy was born but yesterday. It has already made enormous strides. To-day it might be said to dominate the therapeutics of dermatology."

In this country we have not paid enough attention to Radiotherapy. The hospitals are not equipped with proper appliances, nor have they trained students to appreciate the value of the X-ray.

It is more than probable that by reading this work with the importance Dr. Belot has given to it, this therapeutic agent will become more popular and great advantages reaped by numerous patients. It is almost impossible for the private practitioner to have a complete outfit; at the same time, with the advancement of science these formerly very expensive instruments have been placed within the means of the many. It is only by reading such a volume as this that one can appreciate the many machines that have been advocated and rejected, and also to appreciate with what a comparatively small outlay a very complete outfit may be installed. Physicians should be acquainted with the technique of X-ray, and we have not read a volume that more comprehensively deals with the subject from a therapeutic standpoint than the one under review. As this method of treatment is entirely in its infancy, and such really remarkable results have been obtained in almost every

branch of dermatology, we feel that it would be superfluous for us to review the treatment of any particular disease. Of course it is more in the hypertrophic and ulcerative processes that the great benefits of the X-ray are seen, yet we feel on reading this volume that there is no lesion in dermatology in which the X-ray cannot be used with benefit to the patient.

The illustrations in this book are up to the high standard of the Rebman Company, and that is saying a good deal. The book, from a typographical standpoint, can be easily read, and we can thoroughly recommend it to all practitioners who have any interest in skin diseases.

A Manual of Clinical Chemistry, Microscopy and Bacteriology. By Dr. M. Klopstock and Dr. A. Kowarsky, of Berlin. Translated by Thew Wright, M.D. London: Rebman Limited, 129 Shaftesbury Avenue, W.C. New York: Rebman Company, 1122 Broadway. Toronto: C. E. Wingate, 2 Richmond Street East.

The small volume we have before us is one that we can thoroughly recommend to the student and practitioner who wishes to keep in touch with the advancing medical sciences from a chemical and microscopical standpoint. The chemistry of the secretions is tersely and concisely shown for the whole body. The examination of the urine on which so many volumes have been written, is probably in this one treated in a more brief while possibly a more comprehensive way than usual. The blood tests are elaborately described; the different bacteria and their methods of microscopical preparation are described in great detail.

We can thoroughly recommend this book, and are satisfied that it will be of the greatest advantage to the practitioner and student. It is clearly printed on good paper, and well bound.

Pathogenic Micro-organisms, including Bacteria and Protozoa. A practical manual for students, physicians and health officers. By William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Director of the Research Laboratory of the Department of Health, City of New York, assisted by Anna W. Williams, M.D., Assistant Director of the Research Laboratory. Second edition, enlarged and thoroughly revised, with 165 engravings and 4 full page plates. New York and Philadelphia: Lea Brothers & Co. 1905.

We have much pleasure in acknowledging the second edition of this work, but in the review of it we are unable to use the familiar phrase in the review of a late edition, that while many noteworthy features of the first edition have been retained, much has been added, etc. It has all been thoroughly revised and is absolutely up-to-date.

The bacteriological section has been practically rewritten. Part one deals with the general principles of bacteriology in

an excellent manner, with the main theories of the means of resistance of the human body, the theories of immunity and nature of agglutinating substances, etc. Part two, as in the former edition, deals with the special pathogenic bacteria separately, and in this section is given not only a full and concise account of the bacteria from literature, but also from personal work, rendering it of much interest. Part three has been much enlarged, and consists of much other than malarial parasitology, in that it deals with the protozon, using Doflin's classification, and taking up the general characteristics with the main forms to be met with in man and animal.

It is an excellent work, and to quote from the preface: "The presentation of the subject is that for the student and physician rather than for the laboratory worker."

The Principles and Practice of Medicine. Designed for the use of practitioners and students of medicine. By WILLIAM OSLER, M.D., Fellow of the Royal Society; Fellow of the Royal College of Physicians, London; Regius Professor of Medicine, Oxford University; Honorary Professor of Medicine, Johns Hopkins University, Baltimore; Formerly Professor of the Institutes of Medicine, McGill University, Montreal; and Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia. Sixth edition, thoroughly revised from new plates. New York and London: D. Appleton & Co. 1905.

So many sections have been rewritten, and so many alterations made, that in many respects this is a new book. The publishers have furnished a larger page and new type, so that with a considerable increase in the amount of reading matter there has been no enlargement of the volume. "I have tried to make the work a reflex of current knowledge of the symptomatology and treatment of disease, based upon the literature and upon our experience at the medical clinic of the Johns Hopkins Hospital," so writes the author in the preface to the sixth edition. Since the death of the erudite Nothnagel, Osler seems to occupy the premier place in the medical world as clinical teacher, and the excellence of his work is known wherever modern medicine is taught.

A Manual of Diseases of the Nose and Throat. By CORNELIUS GODFREY COAKLEY, A.M., M.D., Professor of Laryngology in the University and Bellevue Hospital Medical College; Fellow of the American Laryngological, Rhinological and Otological Society, etc., etc. Third edition.

As its name implies, this work is intended for the guidance of the student and general practitioner; the various chapters having been carefully revised and enlarged to more successfully meet that end.

While appreciating the general character of the book and endorsing the exposition of the science of Laryngology and

Rhinology, as taught by the author, some statements have slipped into the work, almost in the light of dogmas, which the reviewer cannot accept as accurate, for instance:

"Acute inflammation of the mucous membrane lining the accessory sinuses of the nose is an exceedingly common occurrence."

"Naso-pharyngeal polypi . . . have, like nasal polypi, a marked tendency to return."

"Hemorrhage is frequently persistent after excision of the uvula."

"Hypertrophy of the Lingual Tonsil . . . may be very much relieved or cured for the time being, but the lymphoid hypertrophy frequently returns."

"In chronic granular pharyngitis . . . operation, in spite of cocaine, is quite painful, and in nervous patients a general anesthetic is preferable."

In the experience of the reviewer, naso-pharyngeal polypus has always occurred singly; and once removed, has never been reproduced. Also, after uvulotomy, the only instances in which there was persistent bleeding have been cases in which too large a segment of the uvula has been excised—an exceedingly rare occurrence. Likewise, in cases of chronic granular pharyngitis, he has always found that the application of a ten per cent. solution of cocaine was sufficient to produce complete local anesthesia, permitting the removal of the granulations without pain even in nervous patients.

With the exception of a few slight digressions of the above character, Dr. Coakley's book is an excellent résumé of the subjects of laryngology and rhinology, brought down to the experience of to-day. In it there are good plates, and cuts illustrative of the technique of operative work. The opening plate, illustrating transillumination of the antra is an excellent one; while the cuts demonstrating the sites of sinus disease and the methods of treatment are instructive.

To the matter of diagnosis the author has devoted much attention. This is particularly so in reference to sinus disease, and to elucidate this branch of the subject more fully he has rewritten and reillustrated the chapter bearing upon it.

For convenience of the reader, a special chapter upon therapeutics has been added.

The publishers have also done their part toward producing a compact and well-finished book. P. B.

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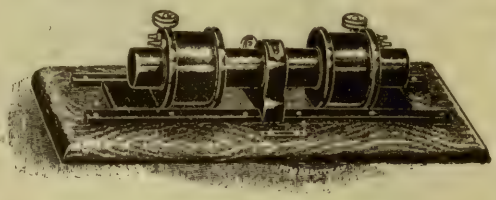

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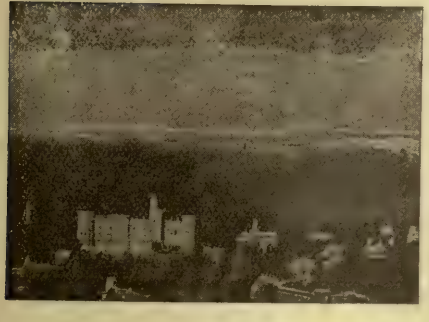

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Miscellaneous.

The Treatment of Impotence.

Enlargement of the prostate is, according to Terrepeon (*St. Petersburg Medicinische Wochenschrift*), the physical basis of most cases, and his article is almost limited to a consideration of the means of relieving this. The greatest relief is obtained from the psychrophora, this being used for an increasing length of time and with a decreasing temperature of water at frequent intervals. The time is at first five minutes, and is gradually increased to twenty-five minutes. The water is reduced in temperature until near the freezing point. It is important that urine should be passed soon after treatment. If the prostate is very hard it is best to use hot water followed by massage, and later to use the cold. When the prostate is reduced, assistance may be had from the use of drugs, mainly strychnine, phosphorus, cannabis, cornutin, and among the best yohimbin. Psychic influence is of the greatest assistance also.—*Therapeutic Gazette.*

The Ultimate Results after Bloodless Reposition of Congenital Hip-Joint Dislocation.

Frederick Mueller, M.D., Chicago (*Medical News,* October 7, 1905), discussing the results obtained in cases operated upon by Lorenz during his recent visit in 1902, refers to thirty-three cases left under his care, in twenty-one of which anatomical results were gained, whereas the number of subspinal positions was twelve. Taking into consideration the high average age of the children operated upon by Lorenz, the result, comprising over 60 per cent. of anatomical cures, and less than 40 per cent. subspinal positions, must be called good. Statistics of surgeons in the various clinics show clearly that Lorenz's promise of 50 per cent. success is not too optimistic, and that the bloodless reposition deserves the first place among all methods which may be considered in the treatment of congenital dislocation of the hip.—*Interstate Med. Jour.*

Treatment of Capillary Bronchitis with Mustard-Water Packs.

Heubner ascribes a life-saving value to this procedure in many cases of capillary bronchitis where pulmonary circulation and the ingress of air is hindered by the swelling of the mucous membrane and the accumulation of inflammatory products in the bronchioles. The remedy acts by drawing the blood to the surface, thus lessening the amount of blood to be

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Above formula is equal to a half drachm dose of Duncan's Comp. Syrup of the Glycerophosphates. These salts are in enormous demand for all cases of debility which require a course of phosphates.

The Caffein Glycerophosphate is an extremely useful adjuvant in preventing nausea and stimulating the action of the heart.

One or two capsules are ordinarily prescribed to be taken thrice daily—after meals.

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moved and diminishing the obstacle due to swelling of the mucous membrane. He describes his technic as follows: Five-tenths of a kilogram or more of mustard flour are stirred into an open dish containing 1.5 liters of warm water at 40 C. until irritating vapors are given off. (This is a little more than a pound of mustard in three pints of water at 104 F.) A linen cloth large enough to envelop the child is soaked in the liquid, wrung out, and spread out on a blanket of the same size. The naked child is laid on the mustard sheet, the upper edge on a level with the neck. It is drawn up, and over it the blanket is rapidly tucked around the neck and wrapped around the feet. This pack is left from 10 to 20 minutes, according to the vitality of the child. When removed from the pack, the whole body is red. The child is quickly placed in a warm bath or sponged with warm water in order to remove the particles of mustard still adhering to the skin. It is then put in a second pack of lukewarm water and left from one to two hours, if possible, in order to maintain as long as possible the hyperemia of the skin which has been secured. In many successful cases, the child looks like a scarlet-fever patient all day. While in the second pack, the temperature is liable to rise, and the child, therefore, should be under constant supervision, in order to interrupt the process if its head and face become red or as soon as it sweats thoroughly. A second warm bath is then given, and, in case the child is very hot, cold water may be quickly poured over it. The child then wiped dry and left undisturbed for the rest of the day. Sometimes the crisis follows, with rapid convalescence, but more frequently a repetition of the process is required on the second or third day or later. It should not be applied, however, more than once in twenty-four hours. This process, like all others, fails in some cases. Where it is not successful in producing reddening of the whole surface of the skin it is better not to attempt to repeat it.—*J. A. M. A.*

Sanmetto in Irritability of the Prostate and in Pre-Senility.

I have used Sanmetto in several cases during the past five years, and have yet to be disappointed in results. Have found it particularly valuable in cases of irritability of prostate gland, with decreased sexual power.—*Jno. T. Henderson, M.D., Cleveland, Ohio.*

Holland is called the paradise of women physicians. The medical profession has been open to women in that country for twenty-six years, and the number of female practitioners is very large.

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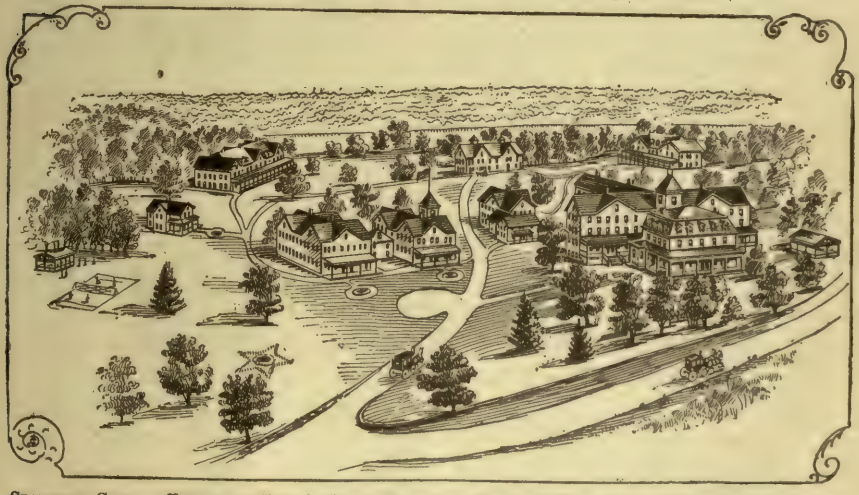

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New Liquid Antiseptic.

Parke, Davis & Co. have recently introduced a new liquid antiseptic of considerable power called Cresylone. It contains 50 per cent. of cresylic acid, and forms clear solutions with water in all proportions.

A 2 per cent. solution of Cresylone is not only an excellent disinfectant for instruments and hands, but a valuable detergent and lubricant, too. It is said not to injure metallic or rubber instruments, though celluloid articles are apt to become friable under its action.

In the treatment of wounds a 1 per cent. solution is usually employed, and a 2 per cent. solution may be used in profoundly septic cases when more vigorous measures are indicated.

Cresylone completely arrests the development of pus organisms, and is, therefore, indicated in the various suppurations with which the general practitioner has to contend. In the treatment of otorrhea, irrigation with a ½ per cent. solution is said to be of benefit. A solution of the same strength is of value in the treatment of ozena.

As it removes odor, it may prove of service in gangrene. In cancer of the cervix uteri the application of gauze saturated with a solution of Cresylone will remove the odor that accompanies this disease. For disinfecting sputa and stools, Cresylone commends itself in the sick-room, hospital ward, schools, prisons, etc.

Therapeutically, the use of Cresylone has been suggested in various pathologic conditions, notably in the treatment of gonorrhea, lupus, tonsillitis, eczema and cystitis of the female.

New York City is preparing to spend $2,000,000 on a city sanitarium for consumptives. Last spring $200,000 was appropriated for beginning this work. The site is on Staten Island, overlooking the Narrows and the lower bay. The spot is said to be the highest on the Atlantic coast between Maine and the Gulf of Mexico. The architect is Mr. Raymond Almirall. The ward buildings will be in the form of an arc; the windows are all to extend to the floor and open on verandas. The roof is to be treated as a roof garden, one portion being enclosed in glass. There are to be two buildings devoted exclusively to the cure of advanced cases in single rooms. Patients in all stages of the disease will be admitted. The site selected is on city property, and the $200,000 already available will, it is estimated, provide accommodation for at least 100 patients.—*Ex.*

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We meet with many cases in practice suffering intensely from pain, where for an idiosyncrasy or some other reason it is not advisable to give morphine or opium by the mouth, or morphine hypodermically, but frequently these very cases take kindly to codeia, and when assisted by antikamnia its action is all that could be desired.

In the grinding pains which precede and follow labor, and the uterine contractions which often lead to abortion, in tic douloureux, brachialgia, cardialgia, gastralgia, hepatalgia, nephralgia and dysmenorrhea, immediate relief is afforded by the use of this combination, and the relief is not merely temporary and palliative, but in very many cases curative. The most available form in which to exhibit these remedies is in "Antikamnia & Codeine Tablets."

The physician cannot be too careful in the selection of the kind of codeia he administers. The manufacturers of "Antikamnia & Codeine Tablets" take every precaution, in fact, they refine and purify every grain of codeia which enters into their tablets. This not only prevents habits and consequent irritation, which follow the use of impure codeia, but it does away with constipation or any other untoward effect.

The First Post-Mortem in Montreal.

According to the *Montreal Medical Journal* there is to be found in the description of "Hakluyt's Voyages," of the travels of Jacques Cartier, the following record of the earliest reported autopsy performed in that city. It took place in Montreal, then known as Hochelaga, in the winter of 1535, when many sailors died of an epidemic disease. "That day Philip Rougemont, born in Ambroise, died, being 22 yeeres olde, and because the sickness was to us unknowen, our Captaine caused him to be ripped to see if by any means possible we might know what it was, and so seek means to save and preserve the rest of the company. He was found to have his heart white, but rotten, and more than a quart of red water about it; his liver was indifferent faire, but his lungs black and mortified, his blood was altogether shrunke about the heart, so that when he was opened a great quantitie of rotten blood issued out from about his heart; his milt (spleen, Ed.) toward the back was somewhat perished, rough as if it had bene rubbed against a stone, Moreover, because one of his thighs was very blacke without, it was opened, but within it was whole and sound, that done as well as we could, he was buried."—*J. A. M. A.*

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"Our observation of the medical literature indicates that ECHINACEA is being used far more than formerly. — J. A. M. A., APRIL 8, 1905."

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Notes on a Case of Perimetritis.—Hukam Chand, C.M.S., Surgeon Delhi Hospital, Delhi, India.

I was called to see a female patient in the city on October 12th, 1904. On arrival I found her with fever, temperature 102 deg., tongue coated, pulse rapid, bowels costive, urine scanty and high colored, pain and tenderness over the hypogastric region as well as in both iliac fossæ, vagina hot (as told by native *dhai*) but no discharge. On palpation the uterus was found hard and on enquiry it was found that the present complaint was due to abortion and exposure to cold. I diagnosed the case as perimetritis associated with ovaritis and prescribed:

(1) Calomel gr. ¼. One every three hours.
(2) Antikamnia & Heroin Tablets. One every four hours.
(3) Turpentine stupes over the seat of pain.
(4) Liquor Morphia, 15 minims at night, *if no sleep.*

October 13th.—Pain less than before, had a good sleep for four hours. Continued the same treatment.

October 14th.—Pain less than the previous day; had good sleep without morphia.

October 15th.—Pain considerably less, patient could walk with the aid of stick. Good sleep. Continued same treatment but stopped turpentine stupes.

October 16th.—Very slight pain remaining, patient weak, otherwise well. Stopped calomel, prescribed castor oil, oz 1, and continued antikamnia & heroin tablets as before.

October 17th.—No pain at all. Bowels moved twice. Prescribed tonic mixture. Patient getting well.

Remarks.—In my opinion the recovery of this case was due to the analgesic and antipyretic properties of antikamnia & heroin tablets. They are worth a trial in such conditions.—*Practical Medicine,* March, 1905, Delhi, India.

Every Little Bit Helps.

"One of the spiciest little journals that comes to the Secretary is the *American Medical Journalist.* It contains many very readable articles, and its last issue seems to be chiefly directed against the various transactions of the American Medical Association, especially against the *Journal.* We rather think that there is a great deal of truth in what it has to say and advise all who wish to know both sides of the question to read it. It is published by D. A. O'Gorman, of New York."—From the Journal of the South Carolina Medical Association (published under the direction of the Publication Committee of the South Carolina Medical Association), Charleston, S.C., Sept. 21, 1905.

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